Test Your Management Skill; Win a Pro-D Award—See Page 34

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How to Get Your Pocket Picked

By DEXTER M. KEEZER

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ave you ever had your pocket picked and your wallet H ave you

If you have, I am sure that you have taken every possible precaution to see that it doesn't happen again.

But if you haven't, please take my advice and padlock your wallet, sew it under your belt, provide a special pocket for it in your undershirt, or do something to avoid having it filched from you.

The occasion for this urgent advice is that I have had my pocket picked and my wallet stolen-I'm sure on a New York City 8th Avenue bus, going north. And it's a galling and humiliating experience, let alone one involving a great deal of inconvenience.

What's worst about it, in my only experience of this kind, is that it is such an indecent invasion of your privacy. It's much like having someone remove your pants and then compel you to walk through Times Square.

Even now, some days after the event, the thought of having some rogue pawing through some of my quite personal effects and tossing those that are non-negotiable into a sewer makes me recoil with disgust, and also shudder some for my stupidity in being his victim.

I didn't have much cash in my wallet, at least not enough to moan long about. And I'll probably get my money's worth in instructive experience in trying-unsuccessfully I expect-to recover what I paid for a couple of traveller's checks I had in my wallet as sort of standby money, but without any separate record I can find of the numbers of the checks.

Also, I wasn't nearly so heavily loaded with credit cards as some of my friends whose wallets look like accordians. But I had enough to keep me busy for quite a while writing embarrassing registered letters to get my loss of them duly reported and, I hope, successful use of them by someone else stopped. How much it will develop they have been used-at my expense-remains to be determined, but I gather it could be a painful lot.

Perhaps my most poignant personal loss was a "short snorter" dollar bill decorated with the signatures of companions with whom I took trips by air to Europe, Africa, South American and way stations during the last war. I forget how the "short snorter" society of wartime overseas air travelers got started, but I was fond of my certificate of membership.

Why I was lugging the "short snorter" bill around in my wallet I'll never know, anymore than I'll ever know why I was (Turn to page 15, column 1)

Cost-Price Squeeze Churning Up Increasing Flood of New Products





SWEEP OF NEW PRODUCTS: Latest devices aimed at P.A.'s from Remington Rand computer station (I) that answers questions verb Comet Mfg. Co. power saw (r) that runs on gasoline, weighs only 11 lb.

FTC Bans 'Aggressive' Price Cuts; Kintner Warns on National Contracts

Washington-Two Robinson-Patman Act opinionsthe other unofficial-had purchasing men pondering the legality of some of their transactions under that controversial pricing legislation today

• The Federal Trade Commission, in a 4-to-1 ruling, declared that companies can offer discriminatory price reductions in "good

faith" to old customers, but such used to obtain new customers.

• A former FTC: chairman, Earl W. Kintner, last week cast doubt on the validity of some "national buy" contracts in a talk before a trade association group at Pebble Beach, Calif. Kintner, now a partner in a Washington law firm, told the National Assn. of Blueprint and Diazotype Coaters, that purchasing agents and vendors may be courting trouble if they agree to national buy price transactions that do not comply with the "cost justificaand "meeting competition'

defenses provided in the act.
The FTC ruling came on a specific case involving the sales of a food product in the Cleve-(Turn to page 4, column 1)

reductions are not legal when Magnesium Industry Hits Faulty Specifications

New York — Representatives of the magnesium industry last week struck out at "misleading" specifications as a major source of confusion between suppliers and their customers.

One supplier urged that companies giving specifications refrain from getting into details on how the job should be done. And Western Electric told how engineering-purchasing-metal-(Turn to page 61, column 1)

· A numerically - controlled drilling machine went on the market this week carrying a price tag (\$8,595) that its manufacturer, Pratt & Whit-ney, claims will enable every metalworking shop in the country to move into this advanced type of machine tool

 New research labs are springing up all over the coun-try. A few of the most recent include Bethlehem Steel's \$25million research lab in Bethleem, Pa.; Continental Can's \$20-million packaging research center at Chicago; Koppers Co.'s new R & D installation at Pittsburgh; Mead Corp.'s paper research center, and Remington Rand's new \$20million laboratories.

New York-The events noted above are the latest and brightest highlights in a record parade of new products that are reaching the industrial market in an almost daily procession. Others will be coming in the months ahead as more and more profit-squeezed companies turn to product de-velopment to expand sales and enlarge or add to existing markets.

And the pace of the product boom is accelerating. An esti-mated 10% of products sold last year were not in existence in 1956. By 1964, it is estimated this figure will increase to 14% as intensified research efforts turn in their payoffs.

Here's a rundown of what's ahead generally in a variety of industrial areas:

• Steel — Higher

(Turn to page 62, column 1)

Panorama

- Rampages of Nature and the threat of war are turning thoughts to disaster-planning. The story on pages 36-37 tells how the P. A. can prepare.
- What's on Tap for the future in the way of new prod-ucts and materials? The 'R&D' column on page 53 outlines the latest developments.
- Used Equipment Sales indicate a growing preference for newer machines. Latest auction prices and coming sales appear on pages 28-29
- Mental Calisthenics Time again. 'School for Strategists' on pages 12-13 takes up the mixed strategy approach to price cutting and gift giving.

New Military Contracts Put Accent on Incentives

Washington-The Pentagon's new stress on higher profit for defense producers who assume greater risks (see P/W, Oct. 9, '61, p. 1) showed up this week in the faster tempo of military contracting now under way. The new style contract provisions used by the military clearly put a premium on streamlined procure-ment practices and close suppliersubcontractor relations.

In two contracts just awarded for additional production runs of major equipment being rushed to Germany, incentives were offered the producers for the first were time. In one case, the aim is faster delivery; in the other, a reduction in production costs. In both cases, contractors will be

(Turn to page 4, column 1)

Packaging Forum Opens

New York-There's still a buyer's market in packaging materials, and its likely to con-tinue for some time. That's the

consensus delegates both manufacturers and users -at the Packaging Institute's annual National Pack-Forum aging held here last week



L. H. Zahn

"There's definitely a buyer's market," said PI Pres. L. H. Zahn, director of purchasing and package development, Ciba Pharmaceutical Products, Inc. (Turn to page 62, column 4)

Purchasing Week's

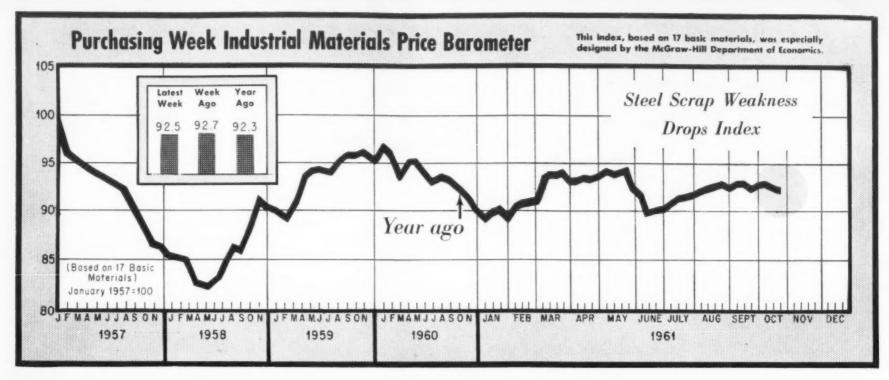
Purchasing Perspective

n their endless search for new and better products, many procurement men have learned their biggest payoff often lies in a long range decision to deal with vendors having strong research and development capabilities.

Such a procurement policy has been proven sound whether the buyer's firm is large or small. It also makes sense regardless of whether the customer has extensive R&D facilities of his own or is too small to afford even a minimum research budget.

An example has been set by one of the country's largest indus-trial companies that boasts of research facilities comparable to the best. For years its purchasing department has sent its representatives out into the field to scout suppliers for improved products and/or materials. Despite its own tremendous R&D capabilities, this company makes a continuing effort to locate vendor companies that are willing to learn its problems and will try to find solutions for them.

Thus how to make the most of today's boom in R&D becomes a matter of major concern for every purchasing department. And NAPA President Russell Stark, in appearances before buyers groups around the country this fall, is thumping the theme that to (Turn to page 61, column 4)



This Week's Commodity Prices

	Oct. 18	Oct. 11		% Yrly
METALS Pig iron, Bessemer Pitts., gross ton Pig iron, basic, valley, gross ton Steel, billets, Pitts., net ton Steel, structural shapes, Pitts., cwt Steel, structural shapes, Los Angeles, cwt Steel, bars, del., Phila., cwt Steel, bars, Pitts., cwt Steel, plates, Chicago, cwt	67.00 66.00 80.00 5.50 6.20 5.98 5.675 5.30	67.00 66.00 80.00 5.50 6.20 5.98 5.675 5.30	67.00 66.00 80.00 5.50 6.20 5.975 5.675 5.30	0 0 0 0 0 0 +
Aluminum, pig, lb	.24 .212 .306 .493	.24 .212 .306 .493	.26 .23 .296 .488	- 7.5 - 7.5 + 3.4 + 1.6
Lead, common, N.Y., lb	.11 .813 1.204 .115	.11 .813 1.211 .115	.12 .74 1.031 .13	$ \begin{array}{r} -8.3 \\ +9.9 \\ +16.8 \\ -11.5 \end{array} $
FUELS Fuel oil #6 or Bunker C, Gulf, bbl Fuel oil #6 or Bunker C, N.Y., barge, bbl Heavy fuel, PS 400, Los Angeles, rack, bbl	2.30 2.62 2.10 .035	2.20 2.62 2.10 .035	2.30 2.62 2.05 .045	$0 \\ 0 \\ + 2.4 \\ -22.2$
Gasoline, 92 oct. reg., Chicago, tank car, gal	.11 .108 .095 .088	.11 .108 .095 .088	.126 .105 .09 .095	$ \begin{array}{r} -12.7 \\ + 2.9 \\ + 5.6 \\ - 7.4 \end{array} $
CHEMICALS Ammonia, anhydros, refrigeration, tanks, ton Benzene, petroleum, tanks, Houston, gal Caustic soda, 76% solid, drums, carlots, cwt Coconut oil, inedible, crude, tanks, N.Y. lb Glycerine, synthetic, tanks, lb	94.50 .31 4.80 .124 .248	94.50 .31 4.80 .124 .248	94.50 .34 4.80 .14 .293	$ \begin{array}{r} 0 \\ -8.8 \\ 0 \\ -11.4 \\ -15.4 \end{array} $
Linseed oil, raw, in drums, carlots, lb	.188 .175 .275 .18 13.15 .31	.188 .175 .275 .18 13.15 .31	.159 .185 .275 .215 18.10 .31	+18.2 -5.4 0 -16.3 -27.3
oda ash, 58%, light, carlots, cwt	1.55 23.50 22.35 .056 .255	1.55 23.50 22.35 .056 .255	1.55 23.50 22.35 .056 .255	0 0 0 0
APER Sook paper, A grade, Eng finish, Untrimmed, carlots,	17.75	17.75	17.75	0
cwt	17.75	17.75	17.75	0
lots, cwt. hipboard, del. N.Y., carlots, ton	25.20 100.00 9.50 6.30	25.20 100.00 9.50 6.30	25.20 100.00 9.50 6.30	0 0 0
Cement, Portland, bulk carlots, fob New Orleans, bbl Cement, Portland, bulk carlots, fob N.Y., bbl Southern pine, 2x4, s4s, trucklots, fob N.Y., mftbm Douglas fir, 2x4, s4s, carlots, fob Chicago, mftbm Spruce, 2x4, s4s, carlots, fob Toronto, mftbm Fir plywood, ¼" AD, 4x8, dealer, crld, fob mill, msf	3.65 4.20 107.00 121.00 82.00 60.00	3.65 4.20 107.00 122.00 82.00 60.00	3.65 4.18 118.00 133.00 82.00 68.00	+ .5 - 9.3 - 9.6 0
TEXTILES Burlap, 10 oz. 40", N.Y., yd. Cotton middling, 1", N.Y., lb. Printcloth, 39", 80x80, N.Y., spot, yd. Rayon twill, 40½", 92x62, N.Y., yd. Cotton drill, 1.85, 59", 68x40, N.Y., yd. Wool tops, N.Y., lb.	.138 .357 .178 .205 .375	.136 .360 .178 .205 .375 1.625	.134 .322 .182 .225 .36 1.425	+ 3.6 +10.9 - 2.2 - 8.9 + 4.2
HIDES AND RUBBER Hides, cow. light native, packers, Chicago, lb Rubber, #1 std ribbed smoked sheets, N.Y., lb	.220 .295	.220 .295	.172	$^{+27.9}_{-12.7}$

Purchasing Week's

Price Perspective

PRICE BOOSTS FOR LATE 1962?—More and more business analysts are becoming concerned about the renewal of inflation sometime in late 1962.

They feel that the current leveling off in production (September output was actually one percentage point below August) is only temporary—and that big gains are ahead.

Chairman Heller of the President's Council of Economic Advisers, for example, sees another 10% output growth over the next year. This he feels, could make the second half of 1962 a "critical period" so far as inflation is concerned.

If Dr. Heller's output estimate proves correct, upward price pressure is bound to result, for a 10% production gain will push over-all operating rates of American industry up to 94% of capacity (from current 85%).

 Λ 94% figure is pretty close to preferred rates—and should give firms a lot more leeway in posting long-delayed price hikes.

ROUGH GOING-Producers trying to boost prices are still finding it

Take makers of copper water tube. After selling at virtually profitless rates for months, they managed to push through a 7½% price increase last July and August. But recently lackluster demand has resulted in a renewed outbreak of price competition forcing most makers to junk the increase

price competition, forcing most makers to junk the increase.

The same fate may be in store for the similar 7½% increase posted on stainless steel sheets by the Jessop Steel Warehouse Division. Despite the fact that service centers are losing money on this item, very few have shown signs of going along with the hike.

Polystyrene is another commodity to watch. If all major producers fail to go along, prices could again sink back to the old price structure pegged on an 18 e/lb. rate for general purpose crystal.

NO ANSWERS YET—Despite the recent rash of metal meetings, both here and abroad, the nonferrous price outlook still remains pretty much up in the air.

• Lead and Zinc—No quick price reaction is expected from last week's Lead-Zinc Study Group's London meeting. Experts point out that it takes time to implement proposals for cutting down global gluts. In lead, for example, few analysts see any quick bounceback to the 8% higher readings of a year ago. The same goes for zinc where widespread discounting in Special High Grade is expected to keep the whole zinc market jumpy.

• Silver—No easy solution for the silver shortage emerged from last week's Treasury meeting in Washington. While all silvermen agree more metal is needed, there's sharp controversy on how to get it.

Producers favor a price boost to spur production—and would achieve this by cutting off sales from U.S. stockpile at the currently low 91\epsilon-92\epsilon/ounce price. Industrial users, on the other hand, would beat the shortage by enlarging the stockpile. They'd do it by letting the Treasury dip into silver reserves now earmarked for currency backing.

• Tin—Outcome of the recent London Tin Council meeting did little to clarify the muddled price picture. Sharp speculative swings are likely to continue as producer and consuming nations still squabble about higher ceiling and floor prices (see story, page 3).

Magnesium is the only area where an industry meeting (Magnesium Assn. Convention in New York) helped clear the price outlook. A spokesman for the Association scotched rumors of an impending fall when he told Purchasing Week: "We do not anticipate any changes—either up or down—over the next few months."

Tin Prices Seen Skittish Over Next Few Months This Week's Scrap Prices

swings in tin are expected to con-

whether to release tin from U.S. stockpiles should also be resolved by that time

Meanwhile, producer countries who had lobbied for higher floor and ceiling prices at the recent Council meeting, are still beefing about their defeat. A Malayan delegate said in Singapore that the consumer countries had been most uncooperative in not agreeing to a realistic tin price range. He said the Malayan delegation would again fight for a new price range at the February meeting of the Council.

The fact that the buffer stock is empty, making it impossible for the Council to influence the market, was undoubtedly an important element in the decision not to alter the floor and ceiling prices at this time

Meanwhile the question about adequate supplies continues to plague buyers. Those who fear shortages note that world consumption continues well above comparable production figures.

Projecting early 1961 statistics for the year as a whole, world consumption in 1961 should reach 183,000 tons Tin produc-tion, on the other hand, should

total only about 160,000 tons.

Many U. S. tinplaters remain undismayed by these figures. They

Price Briefs

Copper water tube competition forced producers to rescind a 7½% increase posted in August on types K, L, and M copper water tube in straight lengths and coils.

Tools and machine parts-Standard Pressed Steel reported spotty increases of around 5% in prices it pays for tools and ma-chine parts.

Tin salts-A slight decline in tin spread to most tin chemicals. Sodium stannate, potassium stannate an 1/2 ¢/lb. and tin crystals dropped

Gasoline—Oversupply forced refiners selling gasoline to the Mid-continent area to cut prices another 1/4 e/gal., leaving tags at a 10-year low and 3e/gal. below year-ago levels.

Phthalic anhydride—Demand for this key volume chemical remained weak, despite recent cuts in prices. Buying was cautious as some felt further price weakness may be in the offing.

Precision bearings-Price increases may be in the works for precision bearings above the miniature size range. Reason: Prices for minimum sizes have been cut three times since May, and producers are hoping to make up the loss by boosting larger precision

will persist until next February when the Tin Council is scheduled to meet again. That session should result in some sort of price ceiling agreement. Also the problem of whether to release tin from LLS. and Bolivia.

New York-Sharp speculative have built up inventories in an- the recently concluded Tin Counswings in tin are expected to continue in light of the International Tin Council's decision to postpone revision of floor and ceiling prices again.

Feeling among dealers both here and abroad is that jumpiness will persist until next February may built up inventories in anticipation of a shortage and are well stocked into early 1962.

They also note that if U. S. stockpile tin is released, the shortage would disappear overnight.

Production is also expected to rise next year. For many marginal will persist until next February mines that couldn't make money.

Figure 10 meeting, proposals called for well stocked into early 1962.

They also note that if U. S. some nations like Bolivia age would disappear overnight.

Production is also expected to rise next year. For many marginal meeting, proposals called for well stocked into early 1962.

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They also note that if U. S. stockpile tin is released, the shortage was even higher prices. The big south American producer claims.

Feeling among dealers both here and abroad is that jumpiness will prove the formation of a shortage and are well stocked into early 1962.

Figure 10 meeting, proposals called for well stocked into early 1962.

They also note that if U. S. Some nations like Bolivia are the feeling price to \$1.25/

Experts, however, see little likelihood of such high prices. They expect sharp fluctuations around the \$1.20 level until Febin the Congo, Indonesia, ruary. After that some stabilizing and Bolivia.

But even this \$1.20 price isn't price level, based on new Tin satisfying producing nations. At Council ceiling agreement.

	Oct. 11	Oct. 18	Year Ago	% Yrly Change
Steel, #1 hv, dlvd Pitt, ton	38.00	38.00	28.00	+35.7
Steel, #1 hv, dlvd Clev, ton	35.00	37.00	25.00	+40.0
Steel, #1 hv, dlvd Chic, ton	36.00	38.00	27.00	+33.3
Copper, #1 wire, dlr buy, feb NY, lb	.24	.235	.210	+14.3
Copper (hv) & wire mix, dlr buy, fob NY, lb.	.22	.215	.190	+13.8
Brass, light, dlr buy, fob NY, lb	.12	.12	.10	+20.0
Brass, hv yellow mix, dlr buy, fob NY, lb	.145	.145	.120	+20.8
Alum (cast), mixed, dlr buy, fob NY, lb	.09	.09	.09	0
Alum (sheet), old clean, dir buy, fob NY, lb.	.095	.095	.085	+11.8
Zinc, old, dlr buy, fob NY, lb	.03	.03	.03	0
Lead soft or hard, dir buy, fob NY, lb	.07	.07	.078	7
Reaber, mix auto tires, dlvd Akron, ton	11.00	11.00	11.00	0
Rubber, synth butyl tubes, East, dlvd, lb	.07	.07	.068	+ 2.9
Paper, old corrug box, dlr, Chic, ton	20.00	19.00	18.00	+11.1
Paper, #1 mixed, dlr, NY, ton	5.00	5.00	1.00	+400.0
Polyethylene, clear, dlr, NY, lb	.04	.05	.10	-60.0



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FASTENER CORPORATION

Incentive Clauses in New Military Contracts

(Continued from page 1)

The Army awarded an \$8.5- 12% set in the contract. million contract to Thompson On the other hand, if Ramo Wooldridge, Inc. of Cleve-land, Ohio to produce 100,000 M-14 rifles. The contract is a get, it must absorb at least 20% fixed-price type with incentive provisions. TRW will get the fixed price for rifles delivered on

The two original producers of the new lightweight M-14 rifle, up another producer for a rela-Olin Mathieson's Winchester- tively small production run on Western Div., New Haven, Conn., and Harrington and Richardson, Inc., Worcester, Mass., are working on firm fixed-price contracts.

The Air Force awarded a \$46.9-million contract to Republic Aviation Corp., Farmingdale, N. Y., for additional production N. Y., for additional production of F-105 fighter-bombers. Under an earlier contract, the company has been producing on a cost-plus fixed-fee basis. Republic is reimbursed costs and paid a specified percentage of costs, probably about 7%, as a fee.

within 2% of the target, Republic will be paid the price specified in the contract. But if the contract. in the contract. But if the comofficials report that the flow of

rewarded with extra profit allow-ances and penalized for either delayed delivery or excessive coups the remaining funds. There is an over-all maximum profit of

On the other hand, if the com-

TRW's M-14 contract also reflects the Defense Dept.'s more serious intent to expand produc
The lates schedule, but get a bonus of 25¢ per rifle per day for weapons delivered ahead of schedule. Similarly, the company will be penalized for rifles delivered behind schedule.

The latest Pentagon ngures now show total contracting for weapon system such as the F-105, however, the Pentagon will continue to retain single prime-continue to retain single prime-contracting sources. Defense worth of orders, but some schedule. officials say the costs for tooling something like the F-105 would year's books. be prohibitive. On smaller, less costly parts and components for the aircraft, however, there will be greater competition for subcontractors

Formal Rating System

Last week, in a speech before the American Rocket Society in York, Dr. Simon Ramo, TRW's executive vice president, pointed up the question of incentives and profits on space de-velopment contracts. Calling for the establishment of a formal rating system to evaluate contractor performance, he said the system In the new contract, however, should be used to determine the company will work on a fixed profit rates and to select contract-

pany runs more than 2% under new military contracts amounted September quarter, up about \$1-billion from the previous quarter, and the heaviest rate of defense contracting since the Korean peak.

In the subsequent two quarters, the volume of contracting is expected to remain close to \$6-billion rate, then will rise well over \$6.5-billion in the April-

worth of orders, but some scheduled contracting is invariably delayed and carried over to next

These figures cover the Defense Dept.'s "capital costs"— procurement of hard goods, research and development of new arms and equipment, and construction. A couple of billion more will be spent to buy soft goods and services.

Spotty Price Cuts in Crude Oil Seen Possible Forerunner of Major Slash

Dallas-Talk of a possible the cuts in Denver-Julesburg, east general cross-country break in Texas, and Louisiana. crude oil prices gave the oil industry a case of jitters last week. The uneasiness, prompted by a series of spotty 10¢-to-15¢ reductions that affected about 400,000 bbl. daily production, increased on a mid-week report that a major firm was planning a looks like third-quarter earnings will take a beating because of product prices," one source pointed out. "When that happens, that a major firm was planning a 35¢ slash in the mid-continent

The industry's crude price structure began wavering Oct. 10 when Pure Oil suddenly cut its prices in the Denver-Julesburg Basin of Colorado, Nebraska, and Wyoming, and in east Teyes and Wyoming, and in east Texas and Louisiana. Sinclair Oil, British American Oil, and some smaller firms followed Pure's action in cutting crude prices.

Several industry people summed up the situation at mid-week by saying a general market break could possible be averted if reductions were not posted in areas like Oklahoma and Kansas. Most doubtful, however, buyers in other areas could ignore to break.

As some also pointed out, pressure has been on crude prices for some time, primarily due to drooping product markets. "It looks like third-quarter earnings you start looking at your crude

Caution Used

Major firms have moved cautiously to cut crude prices, partly because of their own production but primarily because of the howl they can expect from independent producers. The producers have claimed prices should be adjusted upward to 1957 levels, instead of being reduced further. Any general decline would undoubtedly bring renewed charges about foreign oil supplanting domestic production.

Most The producers are fearful, that however, that the market is about

This Month's Industrial Wholesale Price Indexes

Item	Latest	Month	Year	% 1		Item	Latest	Month	Year		Yrly
C P . I	Month	Ago	Ago	Cha	nge		Month	Ago	Ago		inge
Cotton Broadwoven						Pumps & Compressors	112.7	112.7	112.4	+	.3
Goods	97.9	97.3	101.9	-	-	Industrial Furnaces &					
Manmade Fiber Textiles	91.5	91.5	95.7		4.4	Ovens	121.1	120.8	122.2	-	.9
Leather	122.0	120.5	110.6	+1	0.3	Industrial Material Han-					
Gasoline	94.2	96.5	99.7	-	5.5	dling Equipment	108.7	108.8	107.4	+	1.2
Residual Fuel Oils	80.1	80.1	81.5	_	1.7	Industrial Scales	117.1	117.1	115.7		1.2
R&W Stock Lubricating						Fans & Blowers	104.7	104.7	105.1	-	
Oils	112.6	112.6	110.5	+	1.9	Office & Store Machines			100.1		. 4
Inorganic Chemicals		104.0	103.7		.1	& Equipment	106.0	105.9	104.9	i.	1.0
Organic Chemicals	94.1	94.2	99.3		5.2	Internal Combustion	100.0	103.2	104.2	T	1.0
Prepared Paint	106.7	106.7	103.5			Engines	105.1	105.4	104.2	+	.9
Tires & Tubes	92.9	92.9	95.0		2.2	Integrating & Measuring	103.1	103.4	104.2	+	.9
Rubber Belts & Belting.	108.1	108.1	108.4	_	.3	Instruments	122.5	122 6	1212		1.0
Lumber Millwork		101.6	105.3		3.5	Motors & Generators	93.4	122.5	121.3		1.0
	90.2	90.2	99.8		9.6		93,4	93.9	100.5	_	7.1
Paperboard	90.2	90.2	22.0	_	9.0	Transformers & Power	00.0	00.0	0		
Paper Boxes & Shipping	007	02.4	105 3		63	Regulators	89.0	89.2	96.6	_	7.9
Containers	98.7	92.4	105.2		6.2	Switch Gear & Switch-					
Paper Office Supplies	103.5	103.5	103.2	+	.3	board Equipment		106.1	104.1	+	
Finished Steel Products.	108.4	108.5	108.8	-	.4	Arc Welding Equipment		104.9	109.1	-	
Foundry & Forge Shop						Incandescent Lamps	131.6	132.1	130.9	+	.5
Products		108.3	108.4		0	Motor Trucks	105.3	105.3	104.8	+	.5
Nonferrous Mill Shapes.	96.5	96.2	99.4	-	2.9	Commercial Furniture	106.7	106.1	106.9	_	.2
Wire & Cable	88.2	88.3	88.4	_	.2	Glass Containers	102.8	102.8	103.3	-	
Metal Containers	106.2	106.2	104.1	+	2.0	Flat Glass	96.0	96.0	97.6	_	1.6
Hand Tools	114.2	113.8	112.5	+	1.5	Concrete Products	104.6	104.5	104.3	+	
Boilers, Tanks & Sheet						Structural Clay Products		107.4	107.6	_	
Metal Products	101.8	101.8	101.8		0	Gypsum Products		108.0	104.7	+	
Bolts, Nuts, etc		116.2	106.3	+	10.8	Abrasive Grinding	100.0	100.0	104.7	1	2.4
Power Driven Hand		110.2	100.5	1	10.0	Wheels	94.4	94.4	94.8	-	.4
Tools	113.0	111.7	108.4	1	4.2	Industrial Valves		114.7	117.1	_	
Small Cutting Tools		114.8			3.7	Industrial Fittings		89.9	90.5	_	-
Precision Measuring	114.0	114.0	117.2	-	3.1		04.9	07.9	30.3	_	./
	1151	1151	100 5		5.0	Anti-Friction Bearings &	90 1	90.3	00.0		1.0
Tools	113.1	115.1	109.5	+	5.9	Components	89.1	89.2	90.8	_	1.9

Note: 1961 figures reflect BLS wholesale price index revisions.

FTC Bans 'Aggressive' Price Cuts; Kintner Warns on National Contracts

(Continued from page 1) land area. Kintner's views pertained to an entirely separate aspect of R-P and were in no way related to the coincidental FTC action.

The FTC adiabates are sized to the coincident of the the law makes any distinction.

The FTC ruling was viewed as tion a decision that could water down the good faith defense for disby the act, which prohibits discrimination by a seller unless the vendor can prove his lower price and 'new' customers is far easier vendor can prove his lower price was offered "in good faith" to meet competitive pricing. One commissioner, Philip El-

man, dissented from the majority opinion and said the ruling would tend to "protect monopoly and prevent competition."

The ruling came in an FTC complaint against Sunshine Biscomplaint against Sunshine biscuits, Inc., which charged the company granted discounts on potato chip prices of 5% to 7% to 19 of its customers in the Cleveland area. It is illegal under the Robinson-Patman Act to grant discounts to some, but not all, customers who compete volume sale for 25 plant locaall, customers who compete among themselves.

Sunshine replied that it made the price cuts in good faith to

The full commission, though, ruled that Sunshine was making the price cuts to get new customers, not to retain old ones. And tive basis. If the buyer refuses the majority opinion draws a and signs up with a competitor, distinction between "defensive" Kintner said, the seller should price cuts to retain old customers demand an FTC investigation.

and "aggressive" discounts to get

between "defensive" "aggressive" price cutting. And he said the commission's majorto state than to apply to the myriad situations that develop in actual business relations between buyers and sellers," Elman said.

In raising the question of whether national buy contracts meet Robinson-Patman regula-tions, Kintner told his Pebble Beach audience to proceed warily tions.

Indicating a belief some companies have negotiated contracts meet prices of competitive potato chip makers. An FTC hearing ex-aminer agreed and dismissed the tion of R-P provisions, Kintner said vendors and sellers first check the legality of their proposed deal to determine whether the lower prices demanded can be justified on a cost or competi-

Purchasing Week's		*Sept. 1961 101.7 Aug. 1961 101.6 Sept. 1960 103.4
Wholesale	Price Index	Sept. 1960 103.4
		———
	October	
	Estimate	101.6
* Current Figures Reflect		
BLS Wholesale Price Index Revisions		

INDEX RISES SLIGHTLY: Firming tags in paper boxes and shipping containers (up 6.8%) overcame falling gasoline prices (down 2.4%) to move P/W's wholesale price index up 1 point to 101.7 for September. Other changes were narrow, with cotton goods, non-

ferrous shapes, and fasteners up, and finished steel, products and motors and generators lower. October should see this month's slight gain eliminated, with cuts in gasoline, lumber, and nonferrous metals outweighing price gains in textiles and fuel oils.



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Lone Star, Dundee Post Higher Cement Prices

New York-The move toward | announcement cement prices for 1962 gathered strength with announce-ments by Lone Star Cement Co., New York, and Dundee Cement Co., Dundee, Mich., that they will put through increases on Jan. 1

Lone Star will raise prices 10¢ to 15¢ bbl. at eight of its 15 U.S. plants. Dundee will boost prices 10¢/bbl. on cement delivered in the Chicago area. Both increases, however, will be offset by more liberal discount policies

Lone Star and Dundee were the third and fourth major producers to schedule price increases for next year. Comparable in-creases were announced last creases were announced month by Ideal Cement Co., Denver, and Alpha Portland

Cement., Easton, Pa.

The Dundee price increase will apply only on late payments, since the company also add 10¢/bbl. to the discount it gives for bills paid within 15 days

A Lone Star spokesman said a large portion of his company's increase also will be nullified by a more generous discount plan. The new discount will be 4% for payments within 15 days and will apply to all plants prices are being raised. Lone Star will boost

10¢/bbl. at mills in New York, Pennsylvania, Virginia, Indiana, and Kansas. Prices at two mills in Alabama will go up 15¢/bbl.

Priest Frazier, vice president of sales, said Lone Star has not yet decided whether to raise prices at its seven other mills. "Some decisions, one way or the other, are expected shortly," he

In liberalizing their discount policies, Lone Star and Dundee followed the lead of Alpha Portland, which scheduled a higher discount at the time of its price

Kerr-McGee Cuts Back **Cushing Refinery Output**

Cushing, Okla.—Kerr-McGee Oil Industries is terminating the production of gasoline and fuel oils at its refinery here.

D. A. McGee, president, said it was decided to cut out these operations because only modern and efficient plants can compete in today's market. "The cost of the facilities needed to make the Cushing plant completely mod-ern cannot be justified in view of the small margin between the cost of Oklahoma crude and the market price of refined prod-ucts," he added.

The plant, however, is well equipped for manufacturing highquality lubricating oils and will continue to operate in this field, McGee said.

Lower Salt Price Quoted In Two N. Y. Communities

Syracuse, N.Y.—Salt prices dropped this year in two upstate New York communities.

Solvay Process Co.'s price for Syracuse's bulk salt supply was \$1.20-\$1.35/ton below last year's prices of \$16.75-\$12.25. The village of Fairport reported \$2/ton savings on salt from In \$2/ton savings on salt from International Salt Co.—from \$8.90/ton to \$6.90.

Solvay and International were the only bidders for the respective contracts.

Ideal made no change in its of 10¢/bbl. for prompt payment.

Despite the scheduled hikes

by these major producers, other cement makers continued to hedge about their 1962 price Portland Cement, a division of plans. Many still fear they will not be able to make higher prices Chicago, quickly lowered prices stick because of overcapacity in the industry.

September. for instance, at the same time it was talking about increases for policy—which is standard for the industry—of granting a discount has been made on cement delivered from its Dallas mill.

The Lone Star price cut started a chain reaction in the north-central Texas area. Trinity Chicago, quickly lowered prices at its Dallas and Fort Worth plants to \$3.28/bbl., matching the Competition is so keen in new Lone Star price. Other prosome areas that prices now are being forced down. Lone Star, to follow suit.



PUTTING STANDARDS TO WORK: American Standards Assn. Confe ence at Houston Oct. 11 saw these purchasing men in action: (I to r) R. C. Fast, Pan American Petroleum; Boyd C. Jackson, San Antonio; Roy Stockton, Reed Roller Bit Co., and C. W. Doyle, General Dynamics.



NEW...AND TO THE POINT!



"The one that won't work loose" cuts the cost of holding power. That, very simply, is the story of the new Unbrako High Torque with the patented counterbore* knurl point available right now and at no increase in price.

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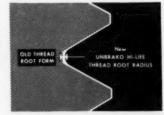
In addition to the counterbore knurl, the new UNBRAKO High Torque offers another advance unique among set screws—the Hi-Life Thread. A smoothly radiused thread root not only distributes stresses to permit significantly higher tightening torques, but also adds metal to this critical area between the root of the thread and the extra-deep Unbrako socket. Get true production economy. Insist on Unbrako-"the one that won't work loose."

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*No. 2,992,669-patented July 18, 1961



Smoothly rediused root of Hi-Life thread dis-tributes stress concentration at critical point, thus making possible Unbrako's higher tightening



Washington Perspective

Ceneral price stability until mid-1962 is expected by Administration economists. And they believe the stage is being set for continued stability beyond that time.

Here is their reasoning—as revealed last week by Walter Heller, chairman of President Kennedy's council of economic advisers:

• While average hourly wage rates keep increasing, they are doing so at a slower pace. In successive years these increases have run 5.6% in 1955 and 1956, then 5.1%, 4.1%, 3.4% and 3.3% for the 12 months ended in June of this year, the rise was only 2.7%.

• Currently, there is a sharp cyclical upswing in output per man-

hour; the rise was 4.8% from the recession low last February to activity in the U.S. by 1975. August.

 The slower rate of wage increases combined with the sharp rise in ouput per manhour results in lower labor costs per unit of production.

All this lays the groundwork for what could be continued expansion of business activity without inflation.

Heller pinpoints mid-1962 as the next critical period for prices. At that time, the economy may be ending a year of growth. The cushion obtained from the current spurt in productivity will be exhausted. Wage increases may begin to outstrip productivity. Business will be good and manufacturers may be able to make price rises stick.

In this case, says Heller, a renewed period of creeping inflation would be a real threat.

A long-range economic projection sees a doubling of construction

activity in the U.S. by 1975. And another doubling of the dollar volume of the construction industry is estimated by the year 2000.

The study was done by the Commerce Dept's Business and Defense Services Administration. Total new construction of \$55.6-billion in 1960 already has risen to about \$58-billion. The study estimates it will rise to \$107.4-billion by 1975 and \$218.7-billion by 2000

The anticipated 1975 figure is spread fairly evenly among the major types of construction. The largest increases are expected in highways (120%) and residential housing (102%).

For the subsequent 25 years

For the subsequent 25 years, largest increases are expected in the following categories: public utilities, 148%; commercial and industrial, 147%; public other than highways and education, 143%, and highways, 127%.

Implications of this outlook go far beyond the construction industry, of course. Construction not only reflects economic growth but also induces growth in a wide variety of other economic sectors.

The tax break given the textile industry last week is a blow struck in the reciprocal trade fight that comes to a climax next year.

The Administration's new ruling allows much larger annual deductions and therefore faster recovery of the cost of purchasing new equipment

new equipment.

There's no doubt that the textile industry—and other industries—can use the incentive to help modernize its capacity with new and more efficient equipment. This should help textile companies somewhat in their tough fight to compete with textiles imported from Japan, Hongkong, and other foreign sources that have both lower cost labor and more modern equipment.

The new aid to the textile industry may in fact gain the industry's backing for the reciprocal trade legislation that the Administration is backing. The basic act expires next June 30 and the Administration wants authority to cut tariffs across the board.

But there's a question whether the liberalized depreciation allowances will be enough in themselves to make much of a dent in the ranks of those who want more trade protection for U.S. industry—rather than less. The Administration's plan is to

The Administration's plan is to come up with a subsidy for hurt industries—but industry executives don't generally like the sound of this, and prefer quotas or other measures that control foreign access to the U. S. market.

There's no doubt that other industries will get the same kind of liberalized depreciation schedules that Treasury has ordered for textiles. Both Secy. Dillon and Undersecretary Fowler have carried the message to business audiences in the past week or so. But there's still the question of

But there's still the question of how other industries are to apply for the depreciation benefits, and what procedures Treasury will follow in granting the tax benefits to other industries. Treasury officials don't know yet.

Hearings before the House Ways & Means Committee next year may be necessary before additional decisions for other industries are forthcoming.



Scientist Devises Procurement Plan Based on Performance Rating Setup

has devised a new government where a contractor lost money. procurement plan, based on a The Government would cancel performance rating system, which the contract instead he says will save "perhaps a third Ramo did not c of our total space program cost."

Dr. Simon Ramo, executive vice president of Thompson Ramo Wooldridge, Inc., and scientific director of the Air Force ballistic missile program, outlined the plan at American Rocket. the plan at American Rocket Society's "Space Flight Report to the Nation."

Ramo's proposal differs from recent Defense Dept. incentive plans mainly through the recommendation of a new federal agency, a Performance Rating Group, which would eliminate. Group, which would eliminate

the need for contract proposals.
"Cost-plus-incentive fee is a factor in the performance rating system, but it is far from the only factor," Ramo said. "Without a substantial effort to create a true performance rating group . . . the cost-plus-incentive system idea by itself may be ineffectual, sub-ject to justifiable criticism and probably will have little lasting effect."

Ramo charged that industry spends more time and effort preparing proposals than on doing a good job once the contract is awarded. "Don't assign the profit on proposals, but rather on per-formance," the space scientist urged. "Tie both the award of new work and the reward for work accomplished to quality of performance.

Here's how the performance

rating system would work:
The Performance Rating Group would set the requirements for each job and choose the firm to do it on the basis of past performance.

The new agency, again judging on the basis of past performance would set the profit schedule of the contractor. Firms with good records would start at a high rate —7% or 8%—while firms whose records were poor would have a lower base.

This profit schedule would rise or fall as the work progressed, depending on the quality of the job. In no case, Ramo said, would

Reports Still Getting Numerous Identical Bids

Dayton, Ohio-Despite recent anti-trust action, the Tennessee Valley Authority is still receiving identical bids on many electrical items, TVA Chairman Brig. Gen. Herbert D. Vogel (ret.) told the Fifth Annual Procurement conference here freedom allowed by abuse of the freedom allowed by our economic system," Vogel

Among the items on which the TVA is still receiving identical bids are: carrier current equipment, transformers, lighting ar-restors, insulators, grinding balls, condensor tubing, and power capacitor units.

Vogel said TVA now requires all bidders to sign a certificate that the bids were arrived at independently, without collusion and that the contents of the bids were not disclosed to other firms.

The conference was sponsored by the University of Dayton and the Dayton Assn. of Purchasing Agents.

New York-A rocket scientist it be allowed to fall to a point

Ramo did not cite an exact dollar figure for the savings he

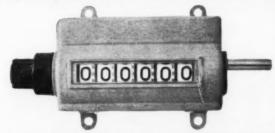
It has been estimated that the space program will cost the U.S. government \$25-million to \$30million over the next five years.

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BIDDERS REPORT CARD: State, local, and U. S. agencies will use this form to report identical bids to federal government starting Nov. 1. Justice Dept. wants data on bids of \$1,000-and-up from state and local P.A.'s, \$10,000-and-up fro buyers. Forms are now being distributed to P.A.'s.



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October 23, 1961

Management Memos

Designing a Horse

There's a new answer to the old criticism that a camel is a horse designed by a committee, according to Cyril O'Donnell of the Graduate School of Business Administration, Univ. of

Writing in Management Review magazine, O'Donnell says that there are no valid complaints against committees, but rather against the misuse of committees. It's the confusion over what a committee is and what it's supposed to do that causes the oft-stated rebukes. What is needed, the author advises, is a good definition of the term.

He defines it as "two or more persons appointed by their immediate superior for the purpose of acting or advising their superior about a subject that is not clearly within the competence of any of them.

O'Donnell says the first ground rule of a committee is determining when to use one. The one time that a committee can be used—and the only circumstance in which its use can be justified—is when it can do a better job than a single manager, he states. When this point is clear, the next step is to define and clarify the goals.

Once the committee knows what it's supposed to do, it has to be informed of its authority. O'Donnell says the appointer must clearly establish whether it is an advisory group to in-vestigate and recommend action, or a decision-making panel.

Finally, advises O'Donnell, the chairman of the committee should at all times get his job on the basis of his ability to conduct an efficient meeting. He feels that following these ground rules strictly will put the committee in its proper place in the organizational structure.

Over There

American companies operating overseas are moving their divisional headquarters and legal structures to the site of foreign operations. The National Industrial Conference Board found in a recent survey that one in three U. S. manufacturing companies engaged in foreign operations is using on-the-scene

Of 350 companies queried by the NICB, 107 had foreign based facilities, with a grand total of 155 individual subsidiaries among them. Another 70 firms said they intend to form such subs in the near future. According to the responses, here are the attractions to going overseas:

• Tax advantages accrue to companies which work overseas through foreign-based, native-staffed

Purchasing Parade

subsidiaries. The parent company gains flexibility in transferring income and assets, shares in treaty tax benefits, and wins deferral of U. S. tax liability on foreign source income from export and overseas

• The parent company gains more autonomy and independence for its international operations.

• It can better integrate its overseas expansion and market development.

• It can put its management and sales people

closer to their foreign markets.

• Locations in a number of countries spread financial and political risks.

Executive Health

Executives who have a tendency to brood over vague symptoms of illness should derive some relief from their hypochondria, as well as a great deal of useful information, by reading a new book, "What An Executive Should Know About His Health," by Dr. Charles E. Thompson (Dartnell Press, Chicago, \$4.95).

According to Dr. Thompson, about one out of every three businessmen who come in to a Chicago health clinic for a physical checkup are found to be suffering from imaginary ailments. Most of these hypochondriacs complain that they are developing symptoms of heart trouble, ulcers, hypertension -all the disorders that are associated with the high-pressure, sedentary life of the modern businessman. But upon examination, Dr. Thompson notes, most of these fears are found to be groundless.

However comforting this statistic may be, the fact is, according to Dr. Thompson, that the businessman is more liable than the average American to metabolic disorders: overweight, high cholesterol, and hyperthyroid listlessness. On the other hand, Dr. Thompson says, he is in many ways healthier than the average American, because he's well fed-and, therefore, is not likely to develop any of the so-called deficiency diseases and is quick to take his troubles to a good physician.

A handy guide for anyone who does a lot of mailing is the 1961 Directory of Post Offices. Besides current addresses and zone numbers, the directory lists the names of post offices that have been discontinued, or have had their names changed in the past two years. Price is \$2.25 per copy from the U.S. Government Printing Office, Washington 25, D. C.

Personal glimpses of P.A.'s as they march by in the news

by lecturing to evening classes at Russell Sage College in Albany. When he joined Olin in 1955, he switched his professional activities to New Haven College, where he lectured in the School of Executive Development sponsored by industries in the area—and also taught under the auspices of the P.A. Assn. of Connecticut. Plumley also participated in several regional programs in cooperation with Brown, Trinity, the University of Bridgeport and other institutions throughout New England. He describes these as "mostly

Since his transfer to New York in 1960, Plumley has been very active in the American Management Assn. in conducting seminars on purchasing, and is chairman of the NAPA's National Committee for Make or Buy, a group which is updating the literature

one-night stands on inventory manage-

Also, last spring, at the request of the International Cooperation Administration, Plumley began showing two section chiefs of the Korean Government's Office of Supply how a progressive American company operates in the purchasing field. The two P.A.'s, Kyoo Sung Lee and Yong Chul Lee, spent

several weeks watching individual purchasing managers work at Olin, then took to the road and visited plants

took to the road and visited plants throughout the country. They're now training in Washington.

Plumley has served as president of the P.A.'s Assn. of Eastern N. Y. and is a member of the P.A.'s Assn. of N. Y.

More after-hour notes on the P.A.:

New Supervisor of District Purchasing for General Chemical Div.,
Allied Chemical Co., (New York), Edward H. Cahill, loves to paint, and spends much of his spare time portrait painting. His completed works now

total twenty.

Cahill also collects oils, and has quite a collection of these, too. Along with his painting, he enjoys photog-

• E. R. Grey, new P.A. for Dow Industrial Service Div. of Dow Chemical Corp. (Cleveland), recently arrived there from Newport News, Va., is anxious to move his woodworking shop equipment to Cleveland and get back

to his favorite 'part-time job.'

Grey is an avid do-it-yourselfer, likes to refinish furniture, and has built his own stereo equipment and cabinet.

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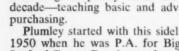
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increasing frequency over the past decade—teaching basic and advanced purchasing.

Plumley started with this sideline in 1950 when he was P.A. for Bigelow-Sanford Carpet Co., Amsterdam, N. Y.,

PROFESSOR P.A., Frank E. Plum-

Olin Mathieson Chemical Corp. (New

York), seen above at the head of the class, has been assuming this role with

Purchasing Week Asks

How do you encourage suppliers to suggest new ideas and ways to cut your costs?

Question asked by: C. V. Short, Vice President & Director of Purchasing, Armour & Co., Chicago



R. A. Mattson, purchasing agent, St. Andrew's Div., St. Barnabas Hospital, Minneapolis:

"We maintain a feeling of openness between ourselves and vendors. This does not mean that vendors are permitted to call on department heads at will; it does mean, however, that the vendors know the purchasing department will give them an opportunity to explain their new products and or new ideas. The P.A. also will arrange for them to confer with department heads when he feels they will effect savings."



D. L. Allen, purchasing agent, Cee Bee Chemical Co. Inc., (aluminum cleaning compounds), Downey, Calif.:

"Almost from the first call a potential vendor makes, we try and acquaint him with our people in research and development, as well as our production people. In this way we feel we achieve mutual respect between all concerned. Once this is accomplished, it seems to be almost an automatic thing whereby ideas are exchanged, questions asked, and answers given."



J. D. McGill, purchasing agent, International Paper Co., Mobile, Ala.:

"During salesmen's calls we emphasize and try to impress on them their responsibility as suppliers' representatives to advise our company of new ideas to reduce costs. To encourage their continually advising us of new materials, methods, and procedures that might effect savings, we in purchasing make it possible for them to present their thoughts to the proper interested personnel of our company."



E. B. Youngren, director of purchases, Green Giant Co., Le Sueur, Minn.:

"By impressing on supplier representatives the fact that they are a part of our 'team,' and that any new ideas we can adopt will prove mutually beneficial. Making available the cooperation of all departments in our company—purchasing, engineering, production, accounting, etc.—is essential. Frankness in discussing problem areas and showing suppliers our present methods and procedures proves helpful also."



Harold Bloom, materiel manager, Avco-Everett Research Laboratory, Everett, Mass.:

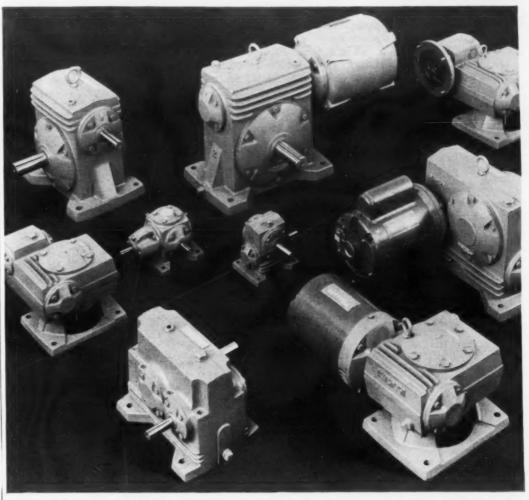
"We try to have our buyers instill in the salesmen who call on us the idea that we are always receptive to new things that will come along. Following through on this, we try to get this information to the person concerned. Also, when we send out drawings for material to be fabricated to our design, we encourage suppliers' suggestions on how to produce it more economically."

Suggest a Question to: 330 West 42 St. New York 36, N.Y.

BOSTON QUALITY

time-proved REDUCTOR® and RATIOMOTOR® reliability

largest selection for worm-geared drives from stock



Horizontal or vertical, right angle or parallel, single or double reduction.

Reductors - for .022 to 15 HP drives - ratios 1:1 to 3600:1.

Ratiomotors - .035 to 10 HP - output torque

4 to 9400 in. lbs. Detachable motor design.

Motor can be changed in minutes.

Ratiomotors sold also without motors

as Flanged Reductors.

1605 stock sizes, types, ratios.

See Catalog 57 for complete listings.

IN STOCK at your nearby DISTRIBUTOR



School for Strategists

his week, "School for Strategists" returns to the games you play with little This week, "School for Strategists returns to the games you have boxes. You'll remember that this fall's session started off with a new, sophisticated version called a Mixed Strategy Game that is more typical of real life cated version called a Mixed Strategy Game that is more typical of real life. situations (see PW, Sept. 11, '61, pp 20-21). To warm up for this more complicated bit of mental gymnastics, first review the instructions, and work out on a regular single-strategy game. Both deal with two old problems in purchasing and sales, the gift and the pre-announcement price cut, and were written by P/W Consultant John M. Owen, Jr.

Review Problem

Two competing companies-Arnold Corp. and Byerson Corp.-want to bid on a contract. Here is their situation:

- If Arnold bids and Byerson does not, Arnold will lose \$2,000.
- If both bid, Arnold thinks he can gain \$1,000.
 If neither bids, Arnold thinks he's \$3,000 better off than Byerson.
- If Byerson bids, and Arnold does not, Arnold figures he's \$2,000 ahead. What should Arnold do?
- 1. Sort his possible moves into two logical groups: 1) What happens if he bids, and 2) what happens if he doesn't. This is what you get:



Specializing in a given field always results in a superior product or service. That's what has happened to McLean-Hayes motor freight service... thanks to over 25 years of specializing in less-than-truckload shipments! This faster, safer, more efficient service can save you money through:

- 1. Broad LTL Market Coverage
- 2. Complete LTL Facilities 3. Proven LTL Experience
- Personalized LTL Attention

Call the LTL specialists at your nearby McLean or Hayes terminal today. We think you'll like the treatment you and your freight receive!



Write for FREE Handy Wall Chart of Points Served Direct!



Arnold bids, so does Byerson	***************************************	Value of to Arnold -\$2,000 \$1,000	Move
Arnold doesn't bid, neither de Arnold doesn't bid, Byerson	does	\$3,000 \$2,000	

2. Now put the dollar value of each move in a box (called matrix) so you can inspect the situation. Write Arnold's moves at the left and Byerson's at the top.

	Byenson Doesn't	Byenson
Amold Bids	\$2,000	\$1,000
Amold Doesn't	\$3,000	\$2,000

3. Find the lowest value in each horizontal series, and the highest value in each vertical series. Here's what you get:

	Byerson	Byenson	_
Arnold Bids	\$2,000	* 1,000	* 2,000
Annold Doesn't	# 3,000	#2,000	\$2,000 ×
l	*3,000	\$2,000 \$	<u> </u>

4. Note that the figure \$2,000—starred for visibility—is common to both horizontal and vertical series. THIS FIGURE IS THE STRATEGIC SOLUTION TO THE PROBLEM. Arnold should not bid and Byerson should.

Now let's convert this same game into a much more complex, mixed-strategy situation. Rerig the contents of the matrix. Drop names, zeros, dollar signs and concentrate solely on the arrangement of numbers.

	E	3
	8	10
A	9	2

If you follow the procedure in the review game we played above, you'll find that no common number emerges from our new matrix (you'll get 8 and 2 in the horizontal series; and 9 and 10 vertically). Now what?

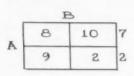
The fact is that you have been tipped off that no single strategy is going to suffice in this new game. Each player will have to mix his actions. YOUR JOB IS TO DETERMINE THE CORRECT MIXTURE. Here's how it's done:

1. In the horizontal series, subtract the smaller from the larger number in each row:

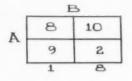
	1	3	_
	8	10	2
A	9	2	7



have just found:



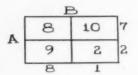
3. Now repeat the process in the vertical series—that is, subtract the smaller from the larger number in each column:



4. Again, reverse your findings:

_	E	3
	8	10
A	9	2
_	8	1

5. Put the outcome of your horizontal and vertical maneu-vers into a composite (that is combine steps No. 2 and No. 4):



6. You now have the answer to the problem in terms of odds. Here's what you have found: A (or Arnold) should bid 7 times and refrain from bidding 2 times out of every 9 plays. Meantime B (or Byerson) should refrain from bidding 8 times and bid once in every 9 opportunities.

Here are a couple of points to remember about the foregoing:

1. The rules above tell you how to play a continuous game one that's repeated over and over. But what if you play the game only once?

You must let the laws of chance help you. Here's how you do it:

In the game above, there are 9 chances. If you are Arnold—with a 7 "bid" and 2 "no-bid" mixture—take 9 matchsticks and shorten 2 of them (the short sticks represent the "no-bid" choice). Put all 9 in a hat, shake well, and draw one. Then play the strategy indicated by the length of the match.

Don't make the mistake of invariably playing the long odds, because your opponent soon would get wise to this. Putting your choice in the hands of fate is the safest, conservative way.

2. In subtracting the smaller from the larger number, remember your algebra. A minus sign becomes a plus in subtraction. Thus 5 minus — 5 results in 10.

Problem I.

Price Cut Announcement

Harry Fox, sales representative of Cut-Rate Supplies, Inc., is being sent out to solicit the trade of R. T. Peachum & Co. The sales manager at Cut-Rate must decide whether or not to au-thorize Fox to offer Peachum a new special price discount ahead of general release. Peachum does not, of course, have any advance

ask for a discount.

give a price cut, and Peachum authorized to give Peachum insists on one, no sale takes place, there's zero gain or loss for either party. If Fox is au-thorized to cut his price, and Peachum insists, Peachum gets it. Score \$500 for Peachum. If Peachum is willing to pay the higher price, and Fox is not au-thorized to offer a discount, Peachum pays the full price. Smith are salesmen for competing count —\$500 for Peachum. If companies. Each year at Christ-

What will the game matrix look like? Should Peachum ask If Fox is not authorized to for a price cut? Should Fox be discount in advance.

Problem II. Christmas Gift Crisis

Bill Cartwright and Sherm Peachum is ready to pay the full mas the two men distribute gifts proves unnecessary. On the other to their customers. As Bill's comband, if it comes at a time when pany is somewhat less well heeled Bill has also decided to splurge,

a good fountain pen.

Bill is not at all happy with this annual upstaging, and so he fountain pen.

The two men would score the foundations as follows: will up his ante occasionally and splurge on really expensive gift cigars. However, Sherm knows a thing or two about gamesman-ship, and realizes he has to vary his strategy to meet the competi-tion. Every few years Sherm gives an expensive desk set.

If this gift happens to coincide with one of Bill's five-cent cigar years, then Sherm's effort

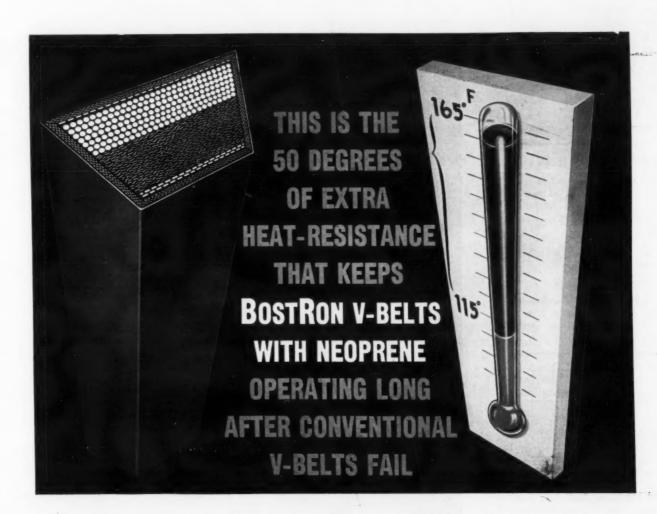
2. Now reverse the figures you knowledge of whether Fox has the authorization. Nor will Cut-know whether Peachum will the game matrix as compared to Sherm's expenses are well modest—a box of five cent cigars as compared to Sherm's gift of new prestige with his gift, and new prestige with his gift is more than Sherm's expenses are well not all the discount score —\$400 the new prestige with his gift is more than Sherm's expenses are well not all the discount score —\$400 the new prestige with his gift, and new prestige with his gift, and new prestige with his gift, and new prestige with his gift is more than Sherm's expenses are well not all the discount score —\$400 the new prestige with his gift, and new prestige with his gift. repaid, as Bill doesn't gain any new prestige with his gift, and he has spent money his company

four outcomes as follows:

Bill gives five cent cigars, Sherm gives fountain pen Bill gives five cent cigars, Sherm gives desk set	-1
Sill gives five cent cigars, Sherm gives fountain pen	+1

How often should Bill give the expensive cigars? How often should Sherm give the desk set?

(Answers on Page 58)



Excessive heat build-up caused by constant flexing — even in environmental temperatures is the major cause of V-belt deterioration. BostRon with Neoprene remedies this problem.

Neoprene withstands heat up to 165°F. (ordinary belts deteriorate at as low as 115°F.), and gives greater resistance to oils, ozone, chemicals, abrasion. This means a high safety margin, long life.

Neoprene with Fiber-Dispersed Stock in BostRon's compression member provides: (1) high cross-wise rigidity, (2) exceptional length-wise flexibility, and (3) extra tensile member support. Fibers are closely packed, in straight lines, and virtually frictionless.

BOSTRON'S Tensile Member, by actual test, gives greater stability, 40% more strength, and is inherently stretch resistant. Moisture gain is only 1/20th that of conventional reinforcing fiber. A special heat and tensioning process for the cords further minimizes stretch. BostRon withstands more shock loading, needs less maintenance, and shows minimum growth even after months of operation.

Inside and out, your best buy is BOSTRON V-BELTS with NEOPRENE



Home Courses Prove Boon to Isolated P.A.'s

by lack of local courses, nearby the firm. colleges or night schools can conduct his own Professional Development program at home through correspondence courses,

as the one offered by the Canadian Assn. of Pur-

Pro-D Section

chasing Agents. For example, last vear two members of American firms in Venezuela completed the two-year purchasing correspondence course offered by the Canadian Assn. in conjunction with the University of Toronto, University Extension, and this year's assignments are being mailed out as far away as Malaya.

The Canadian course, inaugurated in 1956, is open to nonassociation members and also those outside the purchasing field. The over-all cost of the course comes to about \$210. Student fees are \$75 per year, payable in Canadian currency and exchange

Pro-D Calendar

Chicago: Armour Research Founda tion of Illinois Institute of Technology - Computer Applications Symposium, Morrison Hotel, Oct

New York: AMA—Special Materials Conference, Savoy-Hilton Hotel Nov. 27-29

New York: Materials Management Institute, Value Engineering & Analysis skill training course, Hotel Belmont Plaza, Dec. 12-14.

on out-of-town checks. There is an additional \$10 fee for yearend exams, and textbooks cost about \$20 a year.

While the course was designed to be completed in two years, time extensions may be granted. However, it must be finished within four years.

W. A. Small, executive secretary of the Canadian Assn. of Purchasing Agents, reports that "as a matter of interest, students passing with an average of 75% or better in their year-end examinations tell us that it takes 8 to 10 hours study per week to keep in the forefront.

There are four subjects covered each year. The first year's curriculum includes:

- English business letters, oral communications, reports,
- · Accounting—balance sheets, profit and loss statements, cost
- Company Policy—definition of purchasing, breakdown of duties and qualifications of the purchasing staff, inventory control systems and methods.
- Department Organizationvalue analysis, ethics, reciprocal purchasing, personal purchases, public relations, organization and evaluation of a purchasing department.

The second year students

- Commercial Law agency relationship, contracts.
 - Economics—principles, na-

Toronto—The buyer stymied tional policy, and economics of enable him to enter a Canadian

• Departmental Function quality and its control, sound price policies, purchasing capital equipment.

• Departmental Procedure assurance of supply, disposal of surplus, principles, market research, excise tax act, sales tax.

In order to take this two-year high school certificate that would two weeks. Students are expected write such subjects at supple-Ont.

University. Students who lack this, but who have had suitable business and educational experience, may be admitted to the first year conditionally and allowed to continue on successful completion of the first year. A limited number may enroll upon employer certification as to their practical experience.

Specially prepared study macertificate, a student must have a assignments are mailed out every in one or two subjects may re-

Toronto according to the course course, provided they agree. schedule. Assignments university instructors and then returned to the students.

study year which continues candidates taking the exams. through April.

centers close to the studentsanywhere there is an accredited

to spend two weeks on each study mental exams in May of the assignment, and answers are to be following year. They may consubmitted to the University of tinue the second half of the

Examinations will be based on marked and commented on by textbooks and study material used by the students. The University of Toronto will make all arrange-October marks the start of the ments for the supervision of

For additional details on this Annual examinations are held course write to Canadian Assn. of on week-day evenings in May at Purchasing Agents, 357 Bay Street, Toronto 1, Ont. of the Deparment of University Extension purchasing course leading to a terial is issued on enrollment, and school. Students who fail to pass (Correspondence Courses), University of Toronto, Toronto 5,



Hundreds of companies have saved money, improved products and cut production waste as the result of opportunities presented by the Ryerson "Metalogikit."

How? This unique kit is a veritable portable service center...lets you explore many alternatives to material you now use. For example, you can compare several different cutting methods on the same piece of steel to see which is best for your application.

Following are a few random examples showing how Ryerson specialists, using the Metalogikit, have helped customers with a variety of problems-many similar to those you may face every day.

If you would like to put the Ryerson Metalogikit to work for you, call your Ryerson representative for a demonstration—for unbiased recommendations on steel, aluminum, plastics and metalworking machinery.

Keezer: How to Get Your Pocket Picked to Get Your Pocket Picked while I was occupied with gestures designed to be helpful, my wallet was I was quick to the window, and a very bulky and beauty expenses to be helpful, and a very bulky and beauty expenses to be helpful, and a very bulky and beauty expenses to be helpful, and beauty expenses to be helpful.

(Continued from page 1) careless enough not to keep a separate record of the numbers of my credit cards. Why I was stupid enough to have my wallet in a hip pocket also now seems quite a mystery.

Indeed, the only aspect of the lour unless you want to take a extraor-

ing of my wallet was a nice, clean dinary passage.

professional job. A worse jam than usual was first created in happened during one of my rethe bus; my attention was atte

seems quite a mystery.

Indeed, the only aspect of the entire episode that I don't find hour unless you want to take a chance on having an extraor-

I heard the little woman say, "I want to get off, please let me

"If you wanta get out you gotta awl over me," mumbled her ationary seat companion, crawl over me, stationary through what I took to be an alcoholic stupor.

So crawl she did, generating

the window, and a very bulky and heavy enough to hold a set Negro was slumped over in the aisle seat beside her. and then crashed it down on the head of her late seat companion who responded with a growl and

sank further into his seat.

This performance brought a burst of applause from those in the vicinity. Encouraged by this, the woman warmed to her work, and the ber former seat come. and let her former seat com-panion have another roundhouse belt with her handbag, and then another.

Then the mood of the bus changed abruptly. First it was, "Why you beatin' that man that way

And then, "Why don't you go back where you came from and leave us alone?"

"Yea," chimed in several earlier Harlem settlers, "Why don't you go back where you came from?"—which obviously meant Puerto Rico.

As the individual protests were getting blended into something of a roar, the little woman saw things had turned against her, so she stepped off the bus and disappeared.

Then the crowd went after the man who had absorbed the handbag wallops.

"You ain't no credit to our race," complained one, "lettin' that little bitty woman beat you up that way.

"Yea," chimed in another, "you're no credit to us. You're yellow!"

With this, a dapper little fellow up toward the front of the bus picked up the theme, and almost dancing up and down, starting chanting, "You no credit to our race. You're yellow!"

As he kept repeating this, with slight variations, the object of his scorn shook some of the haze out of his head, rose slowly to his feet which had his head virtually scraping the top of the bus, and announced deliberately to his tormenter, "The time has

It was a profoundly impressive promise. With it, much as a magician makes one of his props disappear in a puff of smoke, the dapper little fellow skittered over and around seats to the front of the bus hopped off and disof the bus, hopped off, and disappeared, his throat still intact. And, in relative tranquility, the rest of our miserably congested company lurched on up 8th

There's not this much action every night, nor action with such profoundly significant sociologi-cal overtones as that challenge from Harlem to Puerto Rico, "Why don't you go back where you came from?" But even if it costs a wallet now and then, you meet some mighty interesting people on the New York City 8th 42nd Street during the rush hour

Post Script

My driver's license was in-My driver's license was included in the papers lost in my stolen wallet. When they used the old-fashioned method of issuing replacements, it was possible to obtain one in a day or two. But now that the New York State Dept. of Motor Vehicles has gone modern and is using punch card equipment in issuing punch card equipment in issuing driver's licenses, I am informed that I must expect to wait about three weeks for a replacement. Oh, the endless marvels of automation!

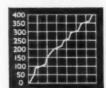
New Hamerslag Subsidiary

San Francisco Equipment Co. has formed a subsidiary, Heco-Pacific Mfg. Inc., to engineer and manufacture ma-terials handling equipment. The new firm will operate from the Hamerslag Equipment facilities here.

sparks new ideas and savings



Scratches and grooves normal to cold drawn, seamless tubing caused high manufacturing costs for a company making small, light-wall hydraulic cylinders. The small I.D. had to be honed to eliminate these faults—often too much metal was removed for proper piston fit. A Ryerson specialist suggested a switch to welded tubing. Using a sample from his Metalogikit, he pointed out the better finish that eliminates expensive honing. The switch was made with these results: higher production, low reject rate, improved product—plus lower purchase price per foot of tubing.



METALOGIKIT TURNS UP 400% PROFIT

Bidding on a routine job was delayed for one steel fabricator because of an unusual material requirement in the specs-calling for an insulating block of phenolic laminate. For help, the company turned to its Ryerson representative, who showed a sample of Ryertex® sheet stock from his Metalogikit. In addition to having the material available from stock, he was able to show how easily it could be fabricated. This Ryerson know-how, demonstrated by the Metalogikit, enabled the customer to enter his bid on time. He got the job, and made a 400% profit.



Fractures and rejects were extremely high for a manu facturer cold forming two severe bends in flat, hot rolled bars. A Ryerson specialist examined the ¾ x 2" bar stock and compared it with a sample of M-1020 flattened round bar from his Metalogikit. He explained how controlled carbon of Ryerson M-1020 bar would produce great cost-saving advantages in this operation over hot rolled, mild steel. After specs were changed to this Ryerson-supplied bar, fractures and rejects were substantially reduced—resulting in new profitability.



STAINLESS FROM KIT LEADS TO SAVINGS

tainless sheets. Application had always called for Type 304, 16 ga. x 66" x 81", polished on one side. Their Ryerson specialist questioned the need for polishing. From his Metalogikit, he showed them a sample of 304 with a 2B finish. The company readily agreed it was exactly the finish needed without polishing—saving delivery time and material cost. The Ryerson man further suggested 16 ga. x 72" x 144", using the cut-off pieces for another job—reducing scrap waste on both requirements. Order was placed and delivered in plenty of time. Over-all result: a substantial saving.



STEEL · ALUMINUM · PLASTICS · METALWORKING MACHINERY

RYERSON STEEL

Joseph T. Ryerson & Son, Inc., Member of the (NIAND) Steel Family

PLANT SERVICE CENTERS: BOSTON - BUFFALO - CHARLOTTE - CHICAGO - CINCINNATI - CLEVELAND - DALLAS - DETROIT - HOUSTON - INDIANAPOLIS LOS ANGELES - MILWAUKEE - NEW YORK - PHILADELPHIA - PITTSBURGH - ST. LOUIS - SAN FRANCISCO - SEATTLE - SPOKANE - WALLINGFORD

General Electric Makes Eddy-current-coupling Drives

And they're dependable drives. The complete line includes water-cooled and air-cooled eddy-current couplings. We call them **KINATROL*** drives. Ratings are from 1 to 150 horsepower, operating from standard a-c power.

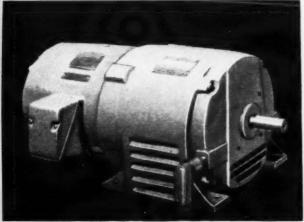
A General Electric **KINATROL** drive is not just another eddy-current coupling. For instance, in the water-cooled coupling, water control is packaged. You'll see much less external piping. Furthermore, the coupling is protected from flooding—and the air gaps are dry, preventing corrosion.

KINATROL couplings are compact, field proven and dependable. General Electric has had a good deal of experience in the engineering, manufacturing, and application of packaged adjustable-speed drives. And we know how important service is to a customer.

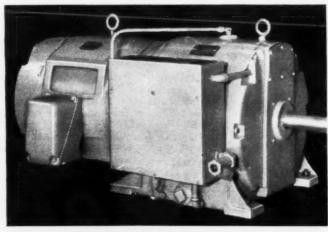
KINATROL —a good product, with the kind of service you can depend on. Please call your nearest General Electric Sales Office for further details.

*Trademark of General Electric Company

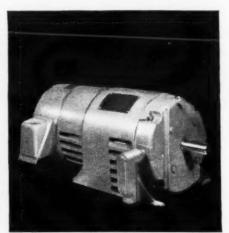
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AIR COOLED, 7-1/2 to 100 HP



WATER COOLED, 25 to 150 HP



AIR COOLED, 1 to 5 HP

DIRECT CURRENT MOTOR AND GENERATOR DEPARTMENT



ERIE, PENNSYLVANIA

Maine P.A.'s Elect Robjents as New President Central Pennsylvania P.A. Group

Agents Assn. elected a new president, J. F. Robjents, Scott Paper Co., at their first fall meeting

Other new officers include: K. D. Cooper, Stone & Webster Engineering Corp., vice presi-



dent; R. W. Clifford, University of Maine, secretary; G. H. Thayer, United Farmers of New England, Inc., treasurer.

Directors

Elected directors were: P. H. Day, Bangor & Aroostock Rail-road Co.; W. P. Crane, Sylvania Electric Products, Inc.; N. C.

High Personal Standards Cited as Foundation For Sound Purchasing Ethics

Detroit-You can't be a little bit unethical. Sound purchasing ethics are a matter of good personal moral conduct, a purchas-ing executive told the Detroit Purchasing Agents Assn.

E. J. Anderson, Jr., director of purchasing, Carborundum Corp., stressed again and again that sound business ethics are more a result of individual attitude and conduct than influenced by legal considerations.

Much is being said and written about ethics in purchasing, Anderson pointed out. Ethical practice in business, he told the group, must be preceded by sound personal ethics. If gifts are not meant to influence, what is the reason for them, Anderson asked.

"Let's not confuse the picture with moderate entertainment whereby a buyer is also able to make reciprocal entertainment with the seller," he said. Anderson referred P.A.'s to the NAPA standards of conduct

and asked them to carry their self analysis of activities further than the current popular trend. Apply the highest degree of personal ethical and moral standards without compromise, he urged, and see it reflected in a truly upgraded purchasing function.

Paper Firms Talk Merger

Atlanta — Union Bag-Camp Paper Corp., New York, is nego-

raper Corp., New York, is negotiating to acquire Write-Right Mfg. Co., Inc., here.
Write-Right, founded in 1922, is a family-held corporation, with annual sales of approximately \$2million. Its products, manufac-tured in a single Atlanta plant, include a line of paper writing tablets and pads.
Write-Right would become a

subsidiary or division of Union Bag-Camp if the acquisition goes

Main speaker at the meeting was Thomas W. Travenner, an assistant state attorney general, assistant state attorney general, who reported that Maine soon will require bidders on public contract to state that they have conspired with any compared the state of Maine, and conspired with any compared to state of Maine, and conspired with any compared to state of Maine, and conspired with the Dept. of

Tavenner briefed P.A.'s on an uncovered.'

Boothbay Harbor, Me.—Members of the Maine Purchasing Agents Assn. elected a new president, J. F. Robjents, Scott Paper

Bourget, Guilford Woolen Mills, antitrust litigation involving certain tar companies that concluded recently with the payment of \$215,000 to the State of of \$215,000 to the State of Maine and \$21,500 to various

There is really no specific way, he said, in which the individual not conspired with any competitor in any way. He said, is the statement will certainly aid in keeping honest bidders competition in any way. He said, by working with the Dept. of will come to accept such analysis as a major tool in determining the right price for subcontracting.

Discussing factors that enter in the construction in the said, and administrative charges. Particular attention, he said, should be paid to the manufacturing loss or scrap factor and all such conspiracies as they are

Discusses Need for Price Analysis

the topic of discussion at the reasonable profit, justifiable ex-Central Pennsylvania Purchasing pense, and other cost factors.

Lancaster-Price analysis was price, he listed such items as

Agents Assn.'s latest meeting.
W. R. McKinley, auditing administrator for RCA's Defense built into the purchase price in-Electronic Products Div., Cam-den, N. J., predicted that in the next five years large corporations gineering charges, and general

right price for subcontracting.

Discussing factors that enter into the construction of purchase also to multiple setup charges.



Let's say you are willing to sacrifice a little quality and buy a carload of distribution materials for ten per cent less than O-B prices. Do you realize it would still cost you the O-B price, and probably considerably more? You would lose money as well as O-B quality!

This carload would go into your warehouse, and part of it might stay there for some time. Every day, every piece would be soaking-up more and more "cost of possession." Few power company warehouses operate as low as ten per cent of the cost of inventory - - many as much as 25 per cent when accounting is realistic.

At the other end of your telephone is a local Graybar house. They have O-B distribution insulators, hardware, and lightning arresters in stock. If these stocks are not large enough, or are the wrong kind, this will be corrected. Agreed minimums will be maintained. You can get what you need, when you need it, as you need it. You let people in the warehousing business take care of your storage. You assume no obligation. You pay only published O-B prices and save the cost of possession. It's worth at least ten per cent -maybe twice that!

And there's something "to boot" in the bargain. You get the recognized best distribution materials on the market - - O-B.

OHIO BRASS COMPANY, MANSFIELD, OHIO





ATA Sees Growth of Private Hauling Slowed

rier truckers are confident that government sanction. they are on the threshold of halting the tendency of growing

of the American Trucking Associations. The inroads of private carriage was the dominant concern of the convention (except to common carriers in all modes the ATA branch made up of private carriers).

The basis of this concern was summarized in a statistic re-ported to the convention by commissioner John W. Bush of the Interstate Commerce Commission. Between 1939 and 1962. the ton-mileage handled by all types of motor carriers rose by 245%. But only 3.5% of the 245% increase was registered by common carriers; the remainder was piled up by unregulated, private truckers

Trend Seen Slowed Down

The belief that the trend toward private carriage will be significantly slowed in the years will be ahead is based on these factors:

• Industry and population is breaking up into smaller units and moving out of the central cities. This dispersion of both production sources and consign-ees favors the common carrier because private trucking is economically attractive only where a large amount of freight exists in a concentrated area to be transported to another concentrated delivery area.

• Industry leaders and govern-ment officials alike promised in numerous speeches at the convention a relentless drive against so-called "gray area" truckers who drain millions of dollars who drain millions of way worth of freight annually away carriers. Gray area truckers perform for-hire

Chrysler Corp. Starts Depreciation Subsidies For Fleet Lease Firms

Detroit-Chrysler Corp. has started a depreciation-subsidy system for owners of auto lease fleets. The subsidy applies to all 1962 model autos and will re-main in effect through 1965. Under the plan, Chrysler will make up the difference between

make up the difference between depreciation and book value when the auto is resold by the leasing company. The plan takes effect after the auto has been in service six months. excluded. Trucks are

Ford Motor Co. initiated a similar subsidy program last year.

High Speed Page Printer

Chicago—Motorla, Inc., is readying for business and industrial applications a high-speed page printer developed originally for military use.

The device is designed for operation over cable, radio, or telephone channels, and can produce up to 3,000 words per min. The basic system includes a message buffer translator, and message buffer, translator, and the printer, and can be used in connection with computer printout or many other communications applications requiring rapid transmission.

• Common carriers are streamlining operations for greater efnumbers of shippers to desert common carriage and engage in "do-it-yourself" trucking.

This confidence provided a buoyant note at the convention buoyant note at the convention.

The American Trucking Accounts of the American Trucking Accounts

• The Kennedy Administra-tion's transportation message to Congress next year will proclaim of transportation as the founda-tion of the nation's transporta-tion system and outline a pro-(and) I think it's about time."

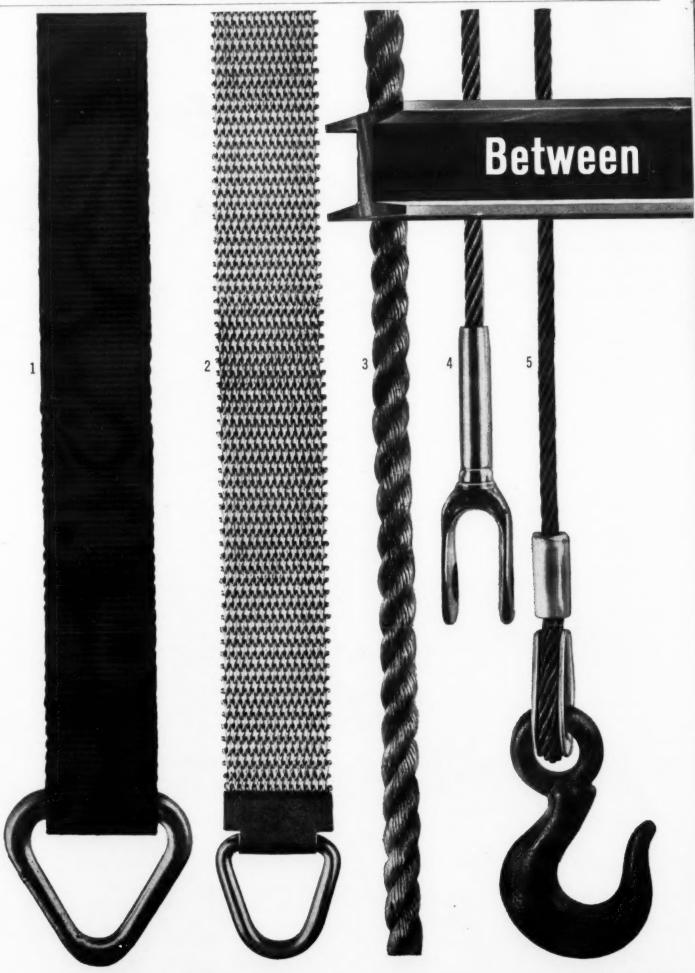
their present crisis.

In another development, an ATA official endorsed a plea by some rail and barge leaders that panding operations to smaller points to get the most out of short-haul operations. and start cooperating.
Welby M. Frantz, ATA board

chairman, told the convention that "there seems now to be some rather firm evidence that the



method for preventing shifti DiGiorgio Fruit PREVENTS LOAD SHIFT: New shifting of palletized loads has been introduced by and will be patented. Diagonal straps hold load to floor and one wall.



Purchasing Week

Honolulu Probers Find 618 Cases Rochester Hospitals Of City Purchasing Law Violations

Honolulu—A special investi-gator who probed the city's pur-chasing system said he found 612 instances where the law was broken.

Robert E. Cates added that for every violation he was able to document in the \$6-million-a-lar pattern of violations of the law, and the law was clear, known and understood." could not prove.

involved contract splitting to about? This is the wavoid competitive bidding rebeen doing it for years.

the city. Cates said the building depart-

Centralizing Orders

Rochester, N. Y .- The Rochester Regional Hospital Council plans to broaden its central purchasing plan for 32 hospitals.

Henry H. Hannel, the council's purchasing director, says efforts are being made to obtain agreements from suppliers of meats, drugs, and some heavy

New Teletype, Computer System To Tally Westinghouse Inventory

Pittsburgh — Westinghouse from all divisions. This system Electric Corp. has unrolled plans is different from the company's to establish a high-speed teleorder processing center (see P/W, type communication and comtype communication and computer system that, the firm says, will keep track at the corporate

Aug. 7, p. 23) in that it is company-wide and primarily a fast will keep track at the corporate data accumulation technique, level of all Westinghouse local rather than an order handling

> mit back to the message center to request information stored in the electronic brain.

> Another unique feature of the computer, the firm reports, is its ability to handle several problems simultaneously.

Milwaukee Takes Steps To Expedite Deliveries From Tardy Suppliers

Milwaukee, Wis .- The City of Milwaukee is putting pressure on suppliers to expedite deliver-A clause stating that it is up to the supplier to deliver the goods by a specified date has been inserted in every contract and purchase order.

'We have had some trouble with late deliveries of purchases which cost the city added expense," said City P. A. Andrew L. Lehrbaummer.

Milwaukee County has also

moved to save money through a centralized system of purchasing of snow plows and heavy equip-ment. Highway Commissioner Henry B. Wildschut was given authority to requisition plows from the park commission and county institutions in emergen-cies. Previously each department bought its own equipment for emergency use.

CIAI Workshop to Study Small Shipment Handling

New York — The Commerce and Industry Assn. Institute, Inc., is sponsoring a one-day work-shop on distribution of small

shipments.
Participants include F. P. Ieradi, director of distribution, Underwood Corp.; R. H. Hirschmann, district traffic manager, F. W. Woolworth Co.; and Stephen Tinghitella, director of the institute's transportation department.

The workshop will be held Thursday, Oct. 26, at the insti-tute library. Arrangements to Thursday, Oct. 26, at the insti-tute library. Arrangements to attend may be made through the institute, 99 Church St., N. Y. 7, N. Y. The fee is \$35 for members, \$45 for nonmembers.

Seat Belts Required

Madison, Wis. -- Wisconsin Gov. Gaylord Nelson has signed into law a bill providing for in-stallation of two safety belts on stallation of two safety belts all 1962 and later model cars.

Opponents of the measure estimated it would cost buyers of private autos and trucks and fleets an extra \$3 million annually. Lowest estimates were that it would cost \$1 million.





It's J&L all the way between the hook and the load, because the complete J&L line covers every lifting need. The illustrations here are only a sample. J&L hand and power hoists are not shown. Nor many other wire ropes, wire rope slings, alloy chain slings, fittings, assemblies and accessories. But, illustrated or not, you'll find in the J&L line everything you want for all your lifting jobs.

Your J&L industrial distributor has the complete lifting line for complete safety

Your authorized J&L Wire Rope Distributor is fully equipped to help you. He can provide you with any item from this complete line and can give fast service, too-right down to securing while-you-wait fabrication and repair of alloy chain slings with JalLink (another exclusive J&L development).

In addition, if you are faced with an unusually tough lifting operation, he can arrange for skilled J&L engineers to help you. They'll advise on the most suitable method—or even design a lifting mechanism specifically to meet your problem.

Hundreds of J&L Distributors give you all the advantages of local, personal service, plus the delivery back-up of 15 strategically placed J&L Wire Rope Service Centers, plus the applications help of J&L factory engineers. When you select from the complete J&L line, you get more than everything you need between the hook and the load. You also get service, safety and confidence in lifting-because it's J&L. Call your Jones & Laughlin Wire Rope Service Center or Wire Rope Distributor .oday-they're listed in the yellow pages.

1. Soft Weave Nylon Sling. 2. Woven Wire Belting. 3. Manila Cordage. 4. Swaged with Fork Eye. 5. JalKlamp Bridle Sling. 6. Braided Sling. 7. Alloy Chain Sling

FOR SAFETY IN LIFTING

Jones & Laughlin Steel Corporation

WIRE ROPE DIVISION Muncy, Pennsylvania





1000 PIGEON HOLES: Stacked in two parallel racks hold bar stock up to 10-ft. long. Special fork truck slides whole bay from rack for transport to scale.



fills order by removing desired Warehouseman weight from bay, reading pounds directly on scale System cuts handling time and damage to stock

Portable Pigeon Holes Save Space In Storing Long Length Bar Stock

Chicago — Portable pigeon honeycomb fashion, allowing holes, developed and patented by each bay to slide out. Gageline a Chicago bar stock distributor, anyone who stores long lengths of steel, wood, plastic, or other material.

Designed by Tim Spillios, president of Gageline Steel Corp., the system—to be marketed later this year-consists of many storbays supported by a rack age structure. The rack is built in

claims it can store two to three may prove a space-saving answer times more material than any other method in the same space There are 1,000 bays used to store metal bar stock; each bay holds up to 3,000 pounds in lengths up to 10 feet.

Two Racks Used

At Gageline, where the system has been used for six years, two racks are used.

The system has two major advantages compared to common storage methods:

1. Any bay can be removed easily from the rack without having to move other bays. Material at the bottom of the rack can be taken out without touching bays above it or beside it.

2. The bays are well suited to storage of precision material; the stock is supported in the bays by wooden strips which protect ac-curate finishes. Gageline stores bar stock with four micro-inch finish, and with tolerances down to two-ten thousandths. possible because the design of these bays allows material to be lifted out—it is never pulled out.

Gageline operates the bays in a random access manner, similar to the memory system in modern computers. A main card file is organized first by grade of metal, and second by size. Every bay is according to these two classifications.

To fill an order, the clerk first locates in a file the grade of metal, and second the size. Cards list all bays containing a given size and grade of stock. He tells the warehouse man only two facts: how much material to remove, and from which bay. The floor man does not need to know anything else in order to fill the bill.

Once he has the order ticket, the warehouse man pulls out the specific bay with a fork truck and moves it onto a recording scale. He removes the correct number of pounds from the bay and then returns it to its spot in the rack. The scale ticket goes back to the office for verifications.

Bays Weigh the Same

Each bay weighs the same: after fabrication, they are leaded to give them a standard weight of 200 lbs. When filling an order the warehouse man does not have to figure in the weight of the bay. He can remove exactly the number of pounds of stock required without extra required without computation.

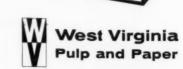
Gageline claims it can fill 1,000-lb. rush order in 15 minutes, from the time a customer calls until his order is loaded on the truck

Gageline pointed out many advantages of its system. It allows one-man operation of the warehouse, and is mechanized to the extent that material is moved by human hands only when removing material from the bays. Also a physical inventory of three mil-lion pounds of bar stock can be made in eight hours by using a portable scale. And the rack structure keeps stock off the floor, allowing heated air to be blown over all material, thus preventing condensation and rust.



You're just moments away from something good to eat—with canned food on the shelf. Processors keep America's pantry filled with a soup-to-nuts variety of foods in cans. And millions of cans are shipped in rugged, economical corrugated

boxes by Hinde & Dauch Division. Canners depend on H&D as a major source of quality shipping boxes in volume.



Hinde & Dauch Division

16 Plants • 42 Sales Offices • Sandusky, Ohlo

Industry News in Brief

Empire Represents Bowen

Electronics Firms to Merge

Waltham, Mass. - Tracerlab-Keleket is planning to merge with Laboratory for Electronics, a Boston electronics firm. The proposed merger is subject to approval of stockholders of both companies.

Thompson Industries Formed

Torrance, Calif. — Space Equipment Corp. has formed Thompson Industries, Culver City, a division which will con-centrate on the design, fabrica-tion and production of ground handling equipment, and other devices used in the aerospace field. Space Equipment said it plans to move the new division to its plant here.

Distributor Adds Lines

Passaic, N. J.—United National Labs, Inc., distributors of electric tubes, semiconductors and transistors, has been named to represent the following manufacturers: Mullard Ltd., England; Raytheon Co., Westwood, Mass.; Machlett Labs, Inc., subdivision of Raytheon Co., Springdale, Conn.; Electronic Enterprises Corp., Newark, N. J.; National Electronics Inc., Geneva, Ill.; Electronic Transistor Corp., North Bergen, N. J., and Semi-Elements Corp., Saxonburg, Pa.

General Electric Offices

Atlanta, Ga.-General Electric Co.'s Computer Dept. established a new district sales office here to serve the North Carolina, South Carolina, Alabama, Georgia, and Florida areas.

Offers Contract Service

San Francisco—Connor Spring Mfg. Co. has formed a new sub-sidiary, Connor Technical Serv-ices, Inc., to offer contract engineering and mechanical products. The new organization will be able to carry a project from original concept through design, prototype, testing and tooling into full manufacture.

Hoffman Sales Office

Los Angeles-Hoffman Electronics Corp.'s Semiconductor Div. opened a new district sales office in Detroit. The division manufactures a wide range of miniature silicon electronic components, including diodes, transistors, controlled rectifiers and solar cells.

Republic Steel Branches

Cleveland — Republic Steel Corp.'s Steel and Tubes Div. has opened new sales offices in Tulsa, Okla., and Houston, Tex. The Tulsa office will serve Oklahoma and parts of Kansas, Missouri and Arkansas, while the new Houston office will serve Texas, New Mexico, and part of Louisiana.

Lighting Firms Merge

Pasadena, Calif. — Empire Equipment Co. will represent Bowen Engineering, Inc., North Branch, N. J., spray drying engineering firm, in California, Cal Corp., a subsidiary of Electro-Consolidated Corp., Reading, Pa., acquired Curtis-Allbright Lighting, Inc., Chicago. Both companies manufacture lighting equipment. Operations will con-tinue at the Chicago plants of both companies both companies.

Land-C-Air Sales, Tuckahoe, Chicago — Electro Luminaire

Lande-All Sales, Tuckanoe,
N. Y., as sales representative for
its line of power conversion and supply equipment. Land-C-Air will represent Dynamic Instru-ment in the Northeastern and Middle Atlantic states

Metal & Thermit Merger

Rahway, N. J. - Metal Represents Land-C-Air

Westbury, N. Y.—Dynamic
Instrument Corp. has named

Kanway, N. J.—Metal & Thermit Corp., here and Udylite Corp., Detroit, proposed a merger of the two companies, with Metal & Thermit as the surviving corporation. The merger tributor for its line of wear-resist-

ers of the two companies.

Chemstrand Buys Blume

New York-Chemstrand Corp., a subsidiary of Monsanto Chemical Co., has purchased a minority interest in Blume Knitwear, Inc., a New York City pro-ducer of sweaters and other apparel. Blume will continue as an independent operation.

Latrobe Appoints Ramco

must be approved by stockhold- ant parts used in the foundry, metal casting, and abrasive fields. Ramco will serve California. Arizona, Nevada, New Mexico, Utah, and Hawaii.

Alcoa Design Dept.

Pittsburgh-Aluminum Co. of America has created a package design department to serve customers of its new printed foil division. The printing will be done for Alcoa by R. R. Donnel-ly & Sons, Inc., Chicago, on new equipment which has been designed especially to meet Alcoa's requirements. Production of the printed foil is expected to begin



Bridgeport's new name for 5 billion feetand 15 years' experience-in coated aluminum

FLEX-COLOR® is the new "shorthand" for coated aluminum sheet that does its job so well that billions of feet have been converted into product performance and satisfaction. This is the coated sheet pioneered in 1946 by Bridgeport's Hunter Douglas Division, and improved every year since by the comparative testing of every new coating for every type of performance.

FLEX-COLOR combines the dependability of performance-tested coat-

ings with aluminum alloys specially rolled in Bridgeport mills to the highest standards of quality.

FLEX-COLOR encompasses a remarkably diverse experience in coatings systems that lets Bridgeport help you select the alloy and coating that suits your production requirements and product performance.

FLEX-COLOR is the all-the-way service that starts with product planning. Call your nearest Bridgeport Sales Office.

BRIDGEPORT FLEX-COLOR **ALUMINUM SHEET**

- all colors, including metallics
- · all finishes from enamel to matte
- single or double-coated · colors on one or both sides
- solid colors and 2-color patterns
- . long-length rolls to 20,000 ft. all coated on aluminum specially

rolled by Bridgeport to exacting gage and width specifications. Write for samples of specific finishes in Bridgeport FLEX-COLOR aluminum.

Bridgeport Brass Company, Bridgeport 2, Connecticut

BRIDGEPORT



ALUMINUM

New Plants, Expansions

Electric Autolite Move

Toledo, Ohio-Electric Auto-Huron, Mich. to Marshalltown, Iowa. Division operations will be consolidated with facilities of Marshalltown Mfg., Inc., a sub-sidiary of Electric Autolite.

Weber Plastics Plant

Stevens Point, Wis. — Weber Plastics, Inc., will open its new plant in Minneapolis, Minn., in November. The facility is adjacent to Weber's technical and sales representative in Minne-apolis, Cosom Corp.

Marlin-Rockwell Branches

Jamestown, N. Y. - Marlin-Rockwell Corp., manufacturer of ball and roller bearings, has opened branch sales offices in Charlotte, N. C., and Boston. The Charlotte unit will service distributors in the Carolinas, eastern Tennessee, parts of Virgostern Tennessee, parts of Vir eastern Tennessee, parts of Virginia and West Virginia, while the Boston office will serve the New England area.

Collins Radio Builds

Dallas-Collins Radio Co. will finish building major Dallas area facilities, a manufacturing building and an antenna research structure, this month. Both units are on the company's 230-acre site at Richardson, Tex.

Datex Sales Office

Monrovia, Calif. -Datex Corp., a subsidiary of Giannini Controls Corp., has opened a sales and service office in Washington, D. C., to serve the southeast U.S. Datex now has six field

Allied Adds Capacity

New York-Allied Chemical Corp. has enlarged its polyethylene facilities in Orange, Allied said capacity of both units was almost doubled. The Orange plant now is rated at 20-million lb./yr. and the Tonawanda plant at 25-million lb./yr.

Geerpres Wringer, Inc.

Muskegon, Mich. — Geerpres Wringer, Inc., manufacturer of floor mopping equipment, has doubled its manufacturing facili-ties here. The firm makes mopping buckets, mop wringers, complete floor mopping outfits and related accessories

Miratel Doubles Plant

New Brighton, Minn.-Miratel Electronics, Inc., is beginning construction to double its plant is beginning Miratel designs and facilities. manufactures television systems

Adds Handling Line

Detroit - Brooks & Perkins. Inc., is broadening the scope of its industrial products division with the addition of such products as portable ramps, aluminum racks, magnesium pallets, dollies, and stock picking trucks to its line of materials handling equip-

Carpenter Buys NTH

Reading, Pa.—Carpenter Steel lite Co., has transferred its dial Co. has expanded its line of stainthermometer division from Port Huron, Mich. to Marshalltown, Iowa. Division operations will be NTH Products, Inc., El Cajon, a manufacturer of thin Calif... wall welded tubing.

Koppers Wood Process

Pittsburgh-Koppers Co., Inc., is planning a major plant ex-pansion at its Oroville, Calif., plant to provide facilities for commercial production of its new "Cellon" process for the pressure-treatment of wood.

Hachmeister Expands

Pittsburgh—Hachmeister, Inc., subsidiary of H. J. Heinz Co., is expanding its production, sales company's line of waxes, adhesives, and polishes.

Mutual Tool & Die

& Die, Inc., a producer of air- capital to expand facilities for \$130,000 plant, three times the size of its present facility.

Air Reduction to Build

San Francisco-Air Reduction Pacific Co., a division of Air Reduction Co., Inc., plans to construct a major expansion spanding its production, sales its air separation plant in Rich-research facilities for the mond, Calif. Completion is scheduled for March 1962

CLP Expanding

Bristol, Conn.—CLP Elec-Dayton, Ohio — Mutual Tool tronics, Inc., said it has obtained aluminum cans.

craft components, will expand its producing tantalum capacitors operations by moving into a new by selling 80% of its common stock to Burnell & Co., Inc., Pelham, N. Y. CLP also makes aluminum foil capacitors, while Burnell manufactures electronic filter networks, delay lines, and related components.

Rexall Expands

Los Angeles-Rexall Drug & Chemical Co. will acquire White Metal Mfg. Co., New York. Rexall said the acquisition would complement its container and packaging division. White makes collapsible metal tubes, slugs and



8 billion eggs a year—in bulk cases or retail cartons—go to market in packaging produced by Packaging Corporation of America, a new name in American business with half a century of packaging know-how. A nationwide sales organization-52 strategically located plants.

Packaging Corporation - a completely integrated nationwide organization with 9 mills, 18 paperboard machines, 43 converting plants producing-CARTONS . CONTAINERS . DISPLAYS . EGG PACKAGING PRODUCTS . MOLDED PULP PRODUCTS . PAPERBOARD . PLASTICS

The Case of the Inexpert Advice

How Would You Solve It?

The American Arbitration Assn. Helped Iron Out A Dispute Over Some Floor Tiles That Buckled

When a man who isn't an expert gives expert advice, trouble almost always follows. That is the lesson one purchasing agent learned when he let his company treasurer dictate on matters that fell outside that executive's field of expertness.

It seems that the treasurer had visited an exposition of building materials and immediately took a fancy to a special kind of plastic flooring. His company was planning extensive plant modernization, and he lost no time in telling the buyer what he had seen. Unfortunately, he didn't merely tell about the flooring; he practically ordered the P.A. to contract for that and no other.

The P.A. set out to do as he was told. When the building materials dealer who was given the order heard that the flooring was intended for the company's washrooms, he advised against it. "That stuff looks fine," he said, "but it isn't practical where steam pipes run under or through the floors. Now here's the kind of flooring I recommend."

On hearing a report of this conversation, the treasurer said: "That dealer is trying to unload some junk on you. It happens all the time. You go ahead and buy the plastic tiles I suggested."

So the P.A. ordered it, and the maintenance crew began laying the flooring in the basement washrooms, near the boiler room. About a week later, the tiles began buckling from the heat of the steam pipes.

gan buckling from the heat of the steam pipes.

Plans for laying the floors in other washrooms were immediately suspended while the P.A. complained to the supplier. "I told you that flooring was no good for your purposes," the dealer answered. "I already have your full shipment of tiles in, but I'll give you a \$3,000 credit on it, as I can sell it in the next few months. Next time take the advice of a man in the business who knows."

The P.A. thought the offer was fair, but the treasurer, probably because of embarrassment over his role, became stubborn. "If that stuff wasn't suitable, he shouldn't have let us buy it. Make him cancel the whole order. And we won't pay for the material already delivered."

The sales contract contained

The sales contract contained an arbitration clause, so the dispute eventually came before three volunteer arbitrators selected by the parties from the panels of the American Arbitration Assn.

What's Your Answer?

If you sat as a member of the arbitration panel in this case, how would you adjudicate the issue? Would you decide in favor of the company that refused to pay, or in favor of the dealer who said, "I told you so."

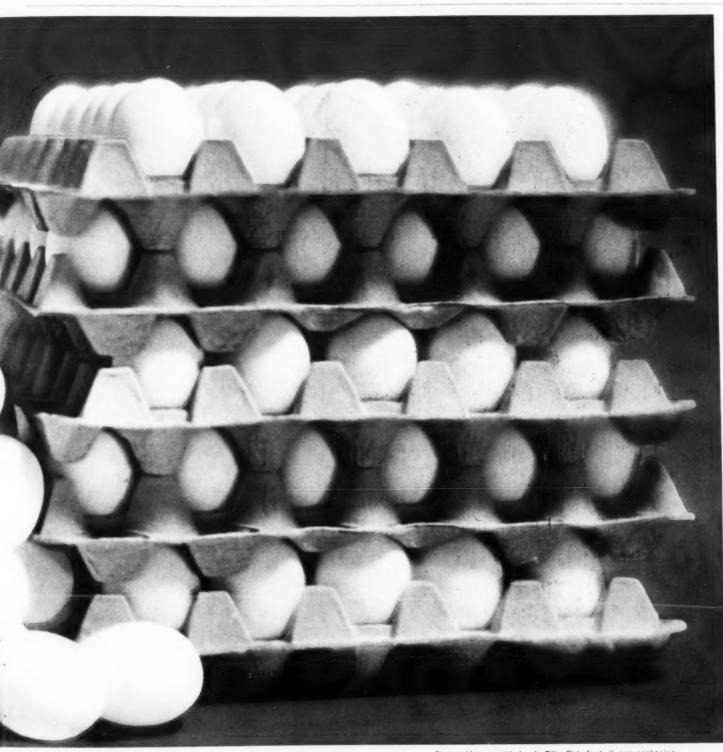
you so."
Make your own decision, then turn to Page 27 and learn how expert arbitrators decision "The Case of the Inexpert Advice,"

Beryllium Corp. to Make Aerospace Components From Pyrolytic Graphite

Reading, Pa. — Beryllium Corp., a major producer of beryllium metal and its alloys, said it will begin shortly to manufacture pyrolytic graphite components for the aerospace and nuclear industries.

Pyrolytic graphite, which is somewhat similar to commercial graphite used in "lead" pencils, is a heat-absorbing material capable of withstanding temperatures in the 4,000 F to 6,000 F range. Unlike other materials, it becomes stronger as the temperature rises, the company said.

The pyrolytic graphite is expected to be used primarily for rocket engine nozzles, nose cones, heat barriers and the leading edges of re-entry vehicles.



Shown: Mapes molded pulp Filler-Flats for bulk egg packaging

Packaging

Corporation of America

This Changing Purchasing Profession

Basil Horsfield, Jr. has being agent, Listerhill Reduction come purchasing agent, Alloys Plant; William C. Sparks has re-turned from the Richmond head-quarters purchasing staff to the discovered by the space of the National Association of Purchasing agent, Listerhill Reduction after 35 years of service with Consolidated Mining & Smelting Co. of Canada, Ltd., Trail, B.C. He is a member of the National Association of Purchasing Alloys Plant as assistant purchasing agent; and David A. Jamieson succeeds Horsefield as purchas- head of the purchasing division,

Arthur Lanson has retired as

tional Association of Purchasing Agents.

Donald E. Brichta has been named manager - purchasing Power Train Group, Chrysler Corp., in Indiana, Michigan, and New York. Prior to this appointment, he had been manager of non-production purchases for the Detroit area plants.

Albert W. Gudal has joined Kopper de Venezuela, C.A., a subsidiary of Koppers Co., Inc., Pittsburgh, as advisory manager of purchasing to assist in the purchasing activities relative to steel operations. Gudal, formerly purchasing agent, Lukens Steel Co., is a member of the National

Raymond W. Gareau has been setts Street Railway, Boston. He had held a similar post with Philadelphia Transportation Co.

mond Foss have been appointed general purchasing agent and purchasing agent, **Doremus &** Co., Chicago.

buyer, has been promoted to pur-Rapids Purchasing Dept. as com-

modity buyer, Packaging Corp. of America, Evanston, Ill.

John A. Payne, former pur-chasing agent of Juette Builders. Buffalo, N. Y., has been named purchasing manager of the Oxford Corp., Williamsville,

agent, Bucyrus-Erie Co., South Milwaukee, Wis., has been ad-vanced to manager of purchases, Bucyrus-Erie, Evansville, Ill.

Lyle C. Ness has taken the post of director of purchasing, Northwest Publications, Inc., St. Paul, Minn. He was formerly as-Elwood L. Potter, purchasing sistant purchasing agent of the Star and Tribune.



Use RED DIAMOND DRY ICE! Guarantee delivery of frozen foods under ideal conditions. Now available in most cities throughout the country, RED DIAMOND DRY ICE assures you of maintaining freezer temperatures and dependable deliveries.

Insist on RED DIAMOND DRY ICE from LIQUID CARBONIC for rapid temperature pulldown during grinding of all meats, holding low temperatures, and shipping perishables.

Your LIQUID CARBONIC representative can help you improve your shipping and delivery procedures, and can acquaint you with the newest processing aids.

LIQUID CARBONIC DIVISION OF GENERAL DYNAMICS

Dept. PW, 135 So. LaSalle St., Chicago 3, III. In Canada: Liquid Carbonic Canadian Corporation,

Limited, 8375 Mayrand St., Montreal 9, Quebec

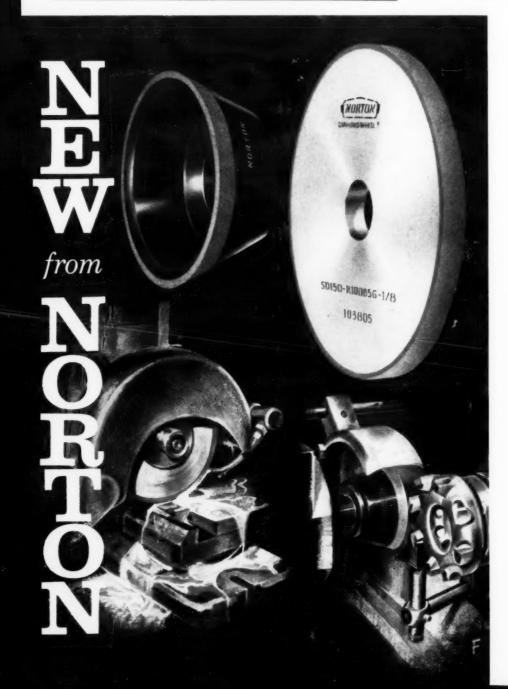
Assn. of Purchasing Agents.

appointed director of purchases and stores, Eastern Massachu-

Harold W. Campbell and Ray-

Robert L. Wilson, chasing agent, Grand Rapids area, and Edwin B. Stephan, material control supervisor, has been transferred to the Grand





$THE\ DIA ext{-}CROWN\ LINE...$

with the first really new bond in all diamond wheel history!

... B-56, an unparalleled advancement for all carbide grinding ... wet and dry

Since Norton Company developed the first diamond wheels for industry in 1929 it has first the resinoid bond, then the metal and vitrified bonds. been the leader in diamond wheel progress

Now comes another "first" from Norton, a brand-new bond, the B-56, an outstanding de velopment combining greater productivity and omy for either wet or dry carbide grind-n ONE bond — providing the finest diaing in ONE bond — providing the finest dia-mond wheels, the Dia-Crown line, ever produced for tool sharpening, die grinding and all other carbide toolroom or production jobs. In test after test on the widest range of

carbide grinding, wet and dry, in custo plants, Norton Dia-Crown B-56 wheels have outperformed all other wheels with major results - per job - including the following:

- Increased volume of carbide removed, per unit of time.
- · Longer wheel life without sacrificing speed · More workpieces handled per wheel.
- · Considerably lower wheel cost per cubic inch of carbide removed.

 Believable? . . . It sure is! Look at these

quotes from customer reports!

"Wheel was so good we could hardly believe it, and checked test results again . . . still showed 30% longer wheel life."

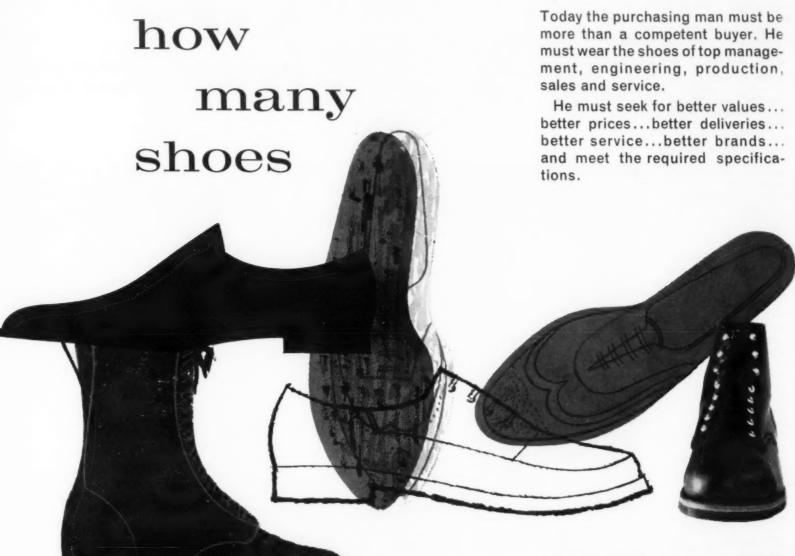
- "This wheel reduced grinding costs from 13¢ to 7¢ per tip.
- 'An extremely fine wheel. Cuts more carbide in a given time than any other wheel.'
- "Best wheel ever used. Will convert to this for all our diamond wheel operations."

That's what our customers say due to this entirely new Norton resinoid bond — a truly outstanding development. Norton Dia-Crown wheels with this new bond are available in all types and sizes for carbide grinding. Remember, too, that if two wheels of the same size and type have been required for wet and dry grinding — this ONE new wheel will now do both — wet or dry, reducing inventories and cutting costs.

Get complete facts on how this new Dia-Crown line of diamond wheels can improve your carbide grinding and save you time and money. See your Norton Man, a trained Abrasive Specialist, or your Norton Distribu-tor. Norton Company, General Offices, Worcester 6, Mass. Plants and distributors



Making better products . . . to make your products bett



must you fill? With so much to do and so little time to do it, value-minded purchasing men are turning to CHAIN Belt, for CHAIN Belt does more than supply quality products. We provide unequaled service to help purchasing men satisfy all demands in power drive and conveying chains, sprockets and couplings.

Your CHAIN Belt sales engineer is much more a problem-solver than a salesman. He approaches your needs from this standpoint.

Why not take advantage of this specialized service! Call your Rex Distributor, your CHAIN Belt Man or write CHAIN Belt Company, 4702 W. Greenfield Ave., Milwaukee 1, Wis. In Canada, write Rex Chainbelt (Canada) Ltd., Toronto and Montreal.

A CALL TO CHAIN BELT
ADDS A MAN TO YOUR STAFF
BUT NOT TO YOUR PAYROLL



Oversupply Seen Keeping Lumber Prices Low

"The yards simply aren't buying for inventory," said one big national distributor. "More than ever, they depend on mills to stock for them and make quick delivery. You can't blame them; they're operating on a 2% margin."

Luttent levers by the usual for usually thins out within a seasonal pickup in home improvement and repairs that occurs about this time.

In plywood, market optimism of course, if the long-awaited surge in the dormant home-build-short-lived price increase. But the current price dolthey're operating on a 2% margin

Large producers point to "ins and outers" or quasi-whole-salers" as contributing to the weak market situation that has seen lumber prices drop 3% to 7% since August.

"These operators appear only in a poor market," explained one lumberman. "They undercut the big mills in special sizes, and create a bargain hunting attitude in the industry."

But the main reason is overproduction caused by optimistic forecasts on home building demand that never materialized.

Concessions

"This created excessive inventories at the mill and rugged, thin-profit, price-battling up and down the retailer-distributor-mill chain," observed an Eastern distributor. "A lot of the price weakness comes from mills offering concessions on one item, say ing concessions on one item-say pine, fir, or hemlock-in their product mix if the customer will also take another slow-moving one

Adding to industry price woes is the steep increase in lumber imports from Canada that recently dropped the key random length green fir 2 x 4's to \$57/1,000 bd. ft.—the low for the year.

And no price strengthening is in sight, lumbermen agree. The Lumber Demand Indicator — a remarkably accurate forecaster of lumber price movements compiled by McGraw-Hill's En-gineering News-Record — lends substance to this pessimism by

the industry.

The indicator, which charts current mill order backlog-inventory ratios for bellwether fir lumber against a ratio calculated for "normal" demand, has been drifting down since July (see accompanying chart). It would take a sharp improvement in the present mill backlog-inventory picture to forecast a price firming, and there

Fawick Licensed to Make Dunlop Clutches, Brakes

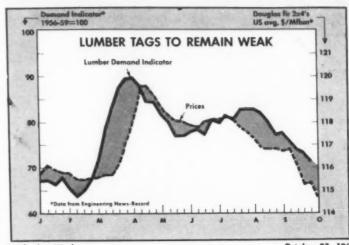
London—Dunlop Rubber Co., Ltd., has licensed the Fawick Airflex Div. of Fawick Corp., Cleveland, to manufacture and sell caliper disc clutches and brakes for industrial applications in the U.S.

Fawick said the brakes and clutches are designed for heavy duty usage in such areas as mining, earthmoving, materials handling, and metalworking. They will be sold in the U.S. as Fawick/Dunlop Caliper Disc Clutches and Brakes.

The company said the clutches and brakes can be operated either hydraulically or by air. Single caliper models now available have maximum torque ratings ranging from 9,700 to 54,300 inch payards. inch-pounds.

Overproduction is no evidence of such a change benchmark 1/4" sanded grade.

in early September caused a short-lived price increase. But excessive domestic production quickly dragged the price down \$6 to \$60/1,000 sq. ft. for the



October 23, 1961



In the World of Sales

Edward J. Doolittle-To product sales manager, cutting and forming equipment, Industrial Equipment Div., Baldwin-Lima-Hamilton Corp., Eddystone, Pa.

Henry D. McMullen-To national sales manager, Ryder Tank Line., Inc., Jacksonville, Fla.

Bruce Frazier-To sales manager for two-way radio, Miratel Electronics, Inc., New Brighton,

president-sales, Youngstown Sheet and Tube Co., Youngs-Youngstown town, Ohio,

James A. McGowan—To general manager of field sales, Aluminum Co. of America, Pitts-

James E. McCloskey—To general sales manager, Engineered Electronics Co., Santa Ana, Calif.

Robert E. Williams—To vice Henry Skigen—To New England sales manager, Clarkson Laboratories, Inc., Camden, N. J. tional sales manager for closed-ant sales manager, Container

John Jipp—To vice president-sales and general manager, Sales and Service Div., Ampex Corp.,

Morse & Co., Yonkers, N. Y. Redwood City, Calif.

James Frauenheim—To New England District sales manager, Magnetics, Inc., Boston.

C. L. Wilson-To sales manager Bowman Steel Corp., Pitts-

Howard H. Hildreth—To assistant sales manager, Washington Steel Corp., Washington,

Dale E. Schonmeyergional sales manager for closedcircuit television products, responsible for marketing television systems in Ind., O., Ky., and Mich., Thompson Ramo Wooldridge, Inc., Dage Div., Michigan City, Inc.

Charles B. Culbert, Jr.-To Charles B. Culbert, Jr.—To eastern district sales manager, welding Products Div., The McKay Co. New York City.

H. Kimble Hicks—To manager, machinery sales Dept.,
Dravo Corp., Philadelphia, Pa. Kay Co., New York City.

Fairbanks, Div., International Paper Co., ers, N. Y. Philadelphia.

James A. McElroy—To general sales manager, Akron Metallic Gasket Co., Akron, O.

James B. Post-To sales manager of engineered products, Industrial Products Div., Western Gear Corp., Belmont, Calif.

William H. McDonald, Jr.— To assistant manager of sales, Sheet and Strip Div., Republic Steel Corp., Cleveland.

John F. Lent-To sales manager, applications group, Los Angeles Div.; Lawrence P. Com-erford—To sales manager, eastern sales region, Servomechanisms, Inc., El Segundo, Calif.

Forest S. Burtch—To general sales manager, John A. Roebling's Sons Div., Colorado Fuel and Iron Corp., Trenton, N. J.

Donald Sauser-To manager, aircraft sales, Cherry Rivet Div., Townsend Co., Santa Ana, Calif.

Mauris S. Huffman-To assistant general sales manager, Brooks & Perkins, Inc., Detroit, Mich.

Frank M. Lukacs—To assistant general sales manager, Willys Motors, Inc., Toledo, Ohio.

Ralph Skaar—To eastern sales manager, Industrial Chemicals Div., Spencer Chemical Co., Kansas City, Mo.

R. B. Calhoun—To assistant manager of distributor sales, Pittsburgh district, Air Reduction Sales Co., New York City.

Melvin I. Smith-To assistant sales manager, Elpac, Inc., Fullerton, Calif.

Arbitration Answer

The arbitrators in "The Case of the Inexpert Advice" decided that the dealer's offer of \$3,000 credit toward the of \$3,000 credit toward the purchase of a different kind of flooring was equitable. The evidence was clear that the dealer had warned the P.A. against the unsuitable purchase. But when the P.A., pressured by his treasurer, had refused to little to good adrefused to listen to good advice, there was nothing more the dealer could do.

The American Arbitration Assn. is a private, nonprofit organization that helps businessmen, management, and labor find peaceful, fair-minded solutions to their quarrels. Many contracts between buyers and vendors contain a "future dis-pute arbitration clause," directing that any controversy or claim be settled in accordance with AAA rules.

Services of the association in adjudicating disputes are available in key business cen-

ters across the country.

For further information, contact the AAA at its main headquarters, 477 Madison Ave., New York 22, N. Y.



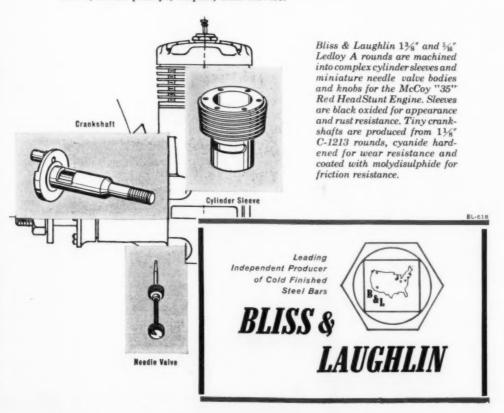
GRUELING MODEL FLYOFFS AT 125 mph

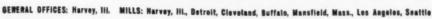
Only steel provides the stamina demanded for critical components of tiny model airplane engines. These midget powerhouses, weighing less than 8 ounces, are capable of speeds up to 125 mph during grueling flyoffs. Only cold finished steel bars can withstand that kind of field service.

For every 25,000 of these little engines, Bliss & Laughlin ships a carload of C-1213 and Ledloy A bars. Here is another example where Bliss & Laughlin furnishes precisely what is needed in strength and machinability. No more, no less. This means profitable production-whether for models or jetsbecause both the cost of materials and the cost of machining are considered.

Only cold finished steel bars are technically correct and economically sound for hundreds of thousands of applications. Check out your designs with Bliss & Laughlin. As the leading specialist in strength, finish, accuracy, straightness and machinability for 70 years, Bliss & Laughlin recommends the most suitable and economical bars from the industry's largest line of cold finished steels.

Seven mills across America, collaborating with Steel Service Centers everywhere, assure prompt, helpful, local service.





P/W Reports on Resale Prices

Latest Auction Prices

SEPTEMBER 25

Tool and die shop, Burbank, Calif. Auctioneer: Max Rouse & Sons, Los Angeles. Clausing Colchester engine lathe, 13 x 36 in. \$1,850. Logan Model 1920 engine lathe. \$650. Grob 18-foot bandsaw. \$850. Lindley jig borer with dials and rods. \$950. Index Model 40 vertical miller. \$750. Leach surface grinder with B & S magnetic chuck. \$635 DeVilbiss 1½-hp air compressor. \$250. DuMore sensitive drillpress. \$85. DuMore tollpost grinder. \$105. Framco No. 2 arbor press. \$45.

Auction held at Egbert Machine & Tool Co., Binghamton, N. Y. Auctioneer: Industrial Plants Corp., New York

New York
Carroll Jamieson 18 x 108-in. geared-head engine lathe. Ser. 5098. \$1,400. Sidney 20 x 78-in. engine lathe. \$100.
Hendey 14 x 30-in. geared-head engine lathe. Ser. 30639. \$1,475. LeBland Regal 13 x 42-in. geared-head engine lathe. Ser. 81167A. \$900. Logan 955 11 x 24-in. engine lathe. Ser. 52260. \$700. Hardinge 6 x 12-in. motor-driven bench lathe. \$220. Rockford 30-ton OBI press. \$195.
K. R. Wilson 60-ton hydraulic arbor press. \$220.

Nicholson No. 2 bench arbor press. \$20. Delta 14-in. motor driven bandsaw. \$150. Wells 5M metalcutting horizontal bandsaw. \$175.
Boyer Schultz 6 x 18-in. hydraulic surface grinder, new 1960. \$1,250.
Boyer Schultz 6 x 12-in. hydraulic surface grinder. Ser. HY5049. \$800. Crystal Lake 5 x 12-in. cylindrical grinder. \$400.

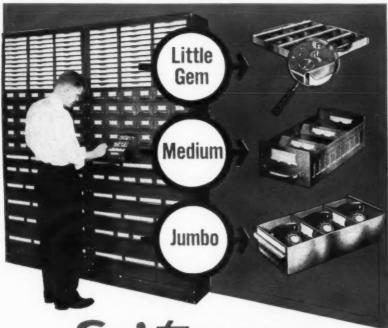
K. O. Lee universal tool and cutter grinder, Model A600. \$150.

Norton 6 x 36-in. plain cylindrical motor-driven grinder. \$200. Cincinnati 12 x 36-in. universal cylindrical grinder. Walker-Turner 20-in. motor-driven floor drill. \$165 . \$200. Delta 17-in, motor-driven floor drill. \$120. Excelsior 20-in. motor-driven floor drill. \$125.
Cincinnati 2MH plain miller. Ser. 5A2PIL-240. \$3,000 Bridgeport Model J 1-hp vertical miller, new 1957. \$1,600.
Bridgeport Model J 1-hp vertical miller. Ser. 9929. \$900.
Linley motor-driven vertical miller. \$500.
Brown & Sharpe No. 1½ universal miller. \$150. Coverted planer miller, with 1-hp Bridgeport vertical milling head. \$275. Schuchard & Schutte 32-in. gear hobber. \$200. Barber Colman No. 3 motor-driven gear hobber. \$120. Barber Colman Model HRS hob grinder. \$50. Surface Combustion natural-gas fired furnace. \$105. Johnson 120A gas furnace. \$100.

Auction held at Treadwell Construction Co., Midland, Pa. Auctioneer: Industrial Plants Corp., New York.

Bement Niles 16/24 ft. vertical boring mill, 168-in. table. \$21,000.

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"Sealed" cable -Tinplate provides a vapor barrier for Western Electric's Stalpeth telephone cable. The conductive copper core has three protective jackets: Aluminum as an elec-trical shield and lightning protector; continuously soldered .0072-in. corrugated tinplate for corrosion resistance and me-chanical protection; and an outer jacket of polyethylene, bonded with asphalt-rubber, for moisture control. The combination of aluminum, tinplate, asphalt-rub-ber and polyethylene replaces heavy lead sheath.

STALPETH TELEPHONE CABLE



Tin developments-

- Battery grids are improved by alloying tin, lead and barium.
- Semiconductor contacts are enhanced by an alloy of tin and germanium or silicon.
- Exothermic reaction between tin oxide, powdered aluminum, and calcium fluoride flux successfully welds aluminum conductor cables. Ignition of powder creates a molten tin alloy which flows into joints, sealing cable splices.

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- 6. SPECIAL CHARTS, special grid designs or special papers to handle any special requirements you may have...are routine to GC.
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Betts 10/16 ft. vertical boring mill, 120-in. table. \$3,500. Niles 84-in. vertical boring mill. \$350. Detrick & Harvey 7-in. Putnam horizontal boring mill. Ser. 7662. \$2,000. Detrick & Harvey 5-in. floor horizontal boring mill. Ser. 245. \$1,000. Prentiss 31/2-in. floor horizontal boring mill. \$1,000. Detrick & Harvey 3-in. floor horizontal boring mill. Ser. 44, \$100 Portable 6-in. spindle floor horizontal boring mill. \$400. Car bottom 17 x 60-in. gas-fired, stress-relieving furnace. \$300. LeBland No. 4 universal miller. Ser. 122. \$200.

Thirteen 8 x 10 and 8 x 20-ft. cast iron layout plates. \$1,500 to \$4,000 each. Baush multiple spindle drill. \$70. Putnam 72 x 40 bed, triple-bock geared engine lathe. \$4,500. Bridgeport 26 x 108-in, geared head lathe. \$1,000.

Lodge & Shipley 36 x 32-in, bed engine lathe. Ser. 22420. \$4,000.

Warner & Swasey No. 3A all-geared head universal engine lathe. Ser. 160165. \$600.

Libby turret lathe. \$150. Libby turret tathe. \$130.

Niles-Bement-Pond 168 x 144 x 40 double housing planer. \$5,500.

Niles-Bement-Pond 88 x 84 x 36 double housing planer. Ser. 755. \$800.

Five 52 x 8.8-ft wide railway flat cars. \$350 to \$50.

Quickwork No. 6 1-in. heavy duty rotary shear. \$700.

Heavy duty 30-ft. pipe draw bench. \$200.

American Machine & Metals Riehle testing machine. Ser. P-19577. \$7,250.

Long & Allstatter Size A single-end punch. \$750. Cleveland double-end punch and shear. \$300.

Bement Niles 1100 guided ram. \$100.

R. D. Wood 200-ton gap type hydraulic fangling press. \$5,000. Cincinnati 24-in. back-geared crank shaper. \$300. Pangborn dust collector. \$1,000. Acme 1/2 to 2-in. bolt threader. \$90.

Auction held at Clarandue Mfg. Co., Lenore, N. C. Auctioneer: Max Rouse & Sons, Los Angeles. Cincinnati Model 1810 power shear, new 1948. \$9,700.
Airthern 10-foot power press brake, 14-gage, new 1951. \$3,000.
Clearing 200-ton punchpress, new 1951. \$10,000.
Verson 105-ton Model 71/2 punchpress. Serial 5801. \$5,000. Clearing 75-ton punchpress, new 1955. \$3,500.
Bridgeport 1-hp vertical miller. Serial 19609. \$1,500.
Cincinnati 15 x 48-in. Cintilathe, new 1953. \$2,000. Boyer-Schultz Model 612 surface grinder, new 1954. \$650. DoALL metal bandsaw, Model ML, new 1951. \$1,000.
Cincinnati 3-ft, 7-in. radial drill, new 1954. \$2,100.
Ingersoll-Rand 10-hp, Type Y two-stage air compressor. \$650.
Avey sliding head Model BMA-1 precision drill, new 1955. \$1,000.

Coming Sales

Grand Rapids Store Fixture Co., Portland,

Cabinet manufacturing equipment. \$285,-000 row materials inventory. \$250,000 woodworking machinery. WRITE, WIRE, PHONE: Milton J. Wershow Co., 7213 Melrose, Los Angeles.

OCTOBER 25

Tencoid Steel & Forge Co., Philadelphia Heavy forging and machining equipment. WRITE, WIRE, PHONE: Industrial Plants Corp., 90 W. Broadway, New York.

Theoli Mfg. Co. (Sale to be held on premises of Scovill Mfg. Co., Waterbury, Conn.

Surplus cold-heading and fastener equip-

WRITE, WIRE, PHONE: Industrial Plants Corp., 90 W. Broadway, New York.

Dreifus Lumber Co., north end of Albina St., North Portland, Ore. ng mill and sawmill.

, WIRE, PHONE: Milton J. Wershow Co., 7213 Melrose, Los Angeles.

Griffin Mfg. Co. (Strip Steel Division only),

WIRE, PHONE: Industrial Plants Corp., 316 S. LaSalle, Chicago.

OCTOBER 31

Novi Mfg. Co., Vernon, Calif.

Machine shop and manufacturing facility. Equipment leased from Industrial Machinery Leasing Corp. \$1-million evaluation. WRITE, WIRE, PHONE: Milton J. Wershow Co., 7213 Melrose, Los Angeles

Shaw Mfg. Co., 1151 Temple, Los Angeles. Machine shap equipment. \$65,000 evalua

WRITE, WIRE, PHONE: Max Rouse & Sons, 463 S. Robertson, Beverly Hills, Calif.

Technological Rift Widens

The technological rift between today's machines and those of 20 years ago is beginning to have a definite effect on auction sales, with ma-chines of prewar and World War II vintage being com-pletely ignored and in-the-1950s models commanding higher and higher prices.

Until a few years ago, it was possible for a shop to get along with millers, grinders, borers and other standard ma chines a couple of decades old. But today's machine tools, especially numerically con-trolled ones, can do so much more than those of the 1940s that a shop equipped with obsolete machines soon finds itself outpriced, outsold and out-produced by its betterequipped competitors.

SILICONE NEWS from Dow Corning

New Process Aid



Silicone Coated Papers Speed Processing of Sticky Products

When processing sticky materials and products, such as raw rubber, candy or resin-bonded laminates, "stickers" can cause lost time and extra cost. They can, but don't . . . if you specify interleaving or process papers with the new Syl-off* silicone stickproof coatings. Syl-off coated papers give quick, easy and complete removal of sticky products, help keep production moving smoothly, hold product waste to a minimum.

AIDS PACKAGING, TOO. Syl-off coated paper and paperboard are now used in packaging a variety of sticky products . . . from asphalt to sweet rolls, from adhesive masses to candied fruits. Standard containers available with Syl-off coated liners or inner surfaces include multiwall bags, fiber drums, unit containers, cores and cartons. Pan liners and wrappers coated with food grade Syl-off may be used in contact with food in com-pliance with the provisions of the Food Additives Amendment of 1958.

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For complete technical information about any silicone product, contact the Dow Corning office nearest you.



Dow Corning CORPORATION

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Boeing's 'Second Look' VA Plan Outlined at Engineers' Parley

effectiveness, came in for some expert treatment at the recent Society of Automotive Engineers' National Aeronautic & Space Manufacturing Engineering &

the group how his company's very successful VA organization works (see P/W, July 24, p. 1), while J. J. Kaufman, senior value engineer, the Martin Co., handled the tricky aspects of gaging

VA results.

Roberts discussed what he termed the "first look," which is value analysis at the design stage; and the "second look," which re-fers to VA in the production stage. In addition, he mentioned areas which have little or no direct bearing on design efforts.

'Second Look' Is Key

The key to Boeing's program is the objective "second look" by the purchasing department. He advised the aeronautical engineers that the nature of the missile age demands the design engineer be back-stopped by purchasing know-how to produce a design that will meet all functional requirements.

"I am convinced that in order "I am convinced that in order to have an effective program, a company must give equal attention and consideration to the product in the pre-design stages and the post design level and nonproduct areas. It is impossible to cover the entire field of potential cost reductions from potential cost reductions from the engineering vantage point alone," he said.

To illustrate the "second look" approach, Roberts posed an actual case from Boeing's experience. A VA study was requested because of the high cost and frequency of rejection due to the difficulty of holding tolerances in a welded part of a life raft door handle. After the study, the company changed from a machine part to a sand casting, and cut the cost by 61%. This is an example of applying VA techniques in the post design or "second look" stage.

Unknown Factors

No matter how exhaustive the efforts of engineering to avoid drawing changes, many factors not known at the time of design will arise making changes mandatory. At this point the "second look" comes into the picture, preferably by someone who was not involved in the original design determination. This party consequently, be more

objective in seeking a better value-to-cost design.

At Boeing the "second look" unit, a task-force in the Material Department, is realizing \$45 for each dollar of direct program costs. In fact, the most significant savings are not attributable to engineering drawing and specification changes, but to the areas of packaging and material handling, procurement changes, and MRO items.

What VA attempts to do in the "first stage," according to Roberts, is to make a close study of the design "in order to achieve the necessary performance, main-

rather than value analysis, is to effect a savings before parts and services are procured and production is begun. Not only are costly which highlighted the Target which has been also and the way his company organized and executed its successful value which has been also and the way his company organized and executed its successful value which has been also and the way his company organized and executed its successful value which has been also and the way his company organized and executed its successful value which has been also and the way his company organized and executed its successful value which has been also and the way his company organized and executed its successful value which has been also and the way his company organized and executed its successful value which has been also and the way his company organized and executed its successful value which has been also and the way his company organized and executed its successful value which has been also and the way his company organized and executed its successful value which has been also and the way his company organized and executed its successful value which has been also and the way has company organized and executed which has been also and the way has company organized and executed which has been also and the way has company organized and executed which has been also and the way has company or a successful which which has been also and the way has been also a Engineering & Manufacturing meeting here.

Ede Roberts, chief of Value Analysis of Boeing Airplane Co.'s Material Department, told the group how his company's to Roberts, "A well-organized, engineering which highlighted the Target cost System—a qualitative way to measure returns from a value engineering viewpoint.

Kaufman stated that "the more to Roberts, "A well-organized, value engineering the results would be to evaluate to Roberts, coordinated value engineering

design team can contribute im-

efficient VE is, the more difficult the results would be to evaluate from a 'dollars and cents' ap-

Los Angeles—Two key problems in value analysis, organizing the program and measuring its effectiveness, came in for some tain-ability and reliability of an measurably to a strong competitive company posture."

Measurably to a strong competitive company posture."

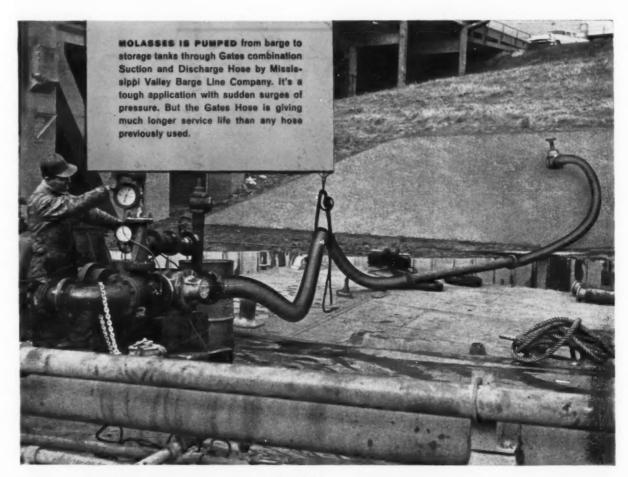
Along with the story Roberts gram, called value engineering advise finance of so difficult to evaluate is that it purpose of this side of the program and measuring its effectiveness, came in for some gram, called value engineering advise finance of so difficult to evaluate is that it is not an isolated activity, but a particular design. This budget estimate is used by the engineer grant and engineering advise finance of so difficult to evaluate is that it is not an isolated activity, but a particular design. This budget estimate is used by the engineer approach called the value engieering proposal."
The target cost system, he ex-

plained, involves two parts: the realistic target cost and the actual cost. For example, manufacturing tooling, procurement,

obtains, compiles, digests, and and the value engineer who re-disseminates to all the affected view the design and attempt to departments, in the form of a meet or better the target. After recommended economical design the product is manufactured, the actual costs are accumulated and

compared with the target costs.

The VE program is considered to be successful if the actual and the costs compare favorably or are lower than the budget estimatethe target cost.



For molasses or any fluid . . . there's a dependable Gates Hose to convey it!

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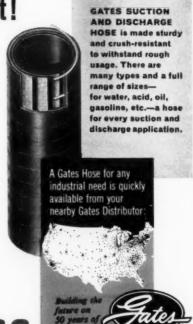
Gates makes a hose for every application in your plant in a full range of sizes-all are top-quality products of Gates continuing program of Specialized Research.

You get fast delivery from local stocks.

The hundreds of Gates Distributors, located in all parts of the country and throughout the world, have large stocks of hose on hand, backed by Gates servicing warehouses in every major industrial center.

This means that you always get quick delivery of Gates Industrial Hose from a local source. Call your nearby Gates Distributor when you need hose of any kind for any purpose.

The Gates Rubber Company, Denver, Colorado



Gates Industrial Hose



PARTS 'SHOWDOWN': Display for vendors at the Portland, Mich., works saved Thompson-Ramo-Wooldridge 4.3% costs; achieved some cost reduction on half of 1,316 items displayed.

Parts 'Showdown' Garners Savings for T-R-W

"showdown" where purchasing lays out a display of all its components to get

plant found seven new sources of supply as a direct result.

vendor ideas sible for a company to get venand cost-cutting suggestions has netted the Portland Works of Thompson - Ramo - Wooldridge, Inc., a total saving of 4.3% on annual material costs.

More then 50% of all 1.316 annual material costs.

More than 50% of all 1,316 purchased items on display inspired cost-saving suggestions, the company said. In addition, this auto and truck components plant found saven pays sources of

The man responsible for initiating the T-R-W program is J. N.

Thompson-Ramo-Wooldridge, Burkheiser, Portland's production manager, who says, "It is impor-tant that suppliers be acquainted with our total requirements package in order to judge properly all

> The Portland Works' normal buying procedure was a semi-annual review with the vendor of each purchased part. But the plant found this process was slow, and didn't provide the broad cov-

> erage needed.
>
> Burkheiser searched for the best way to present his total procurement picture to 138 suppliers. What he wanted to stress to the vendors was an immediate



BURKHEISER OF T-R-W: His idea

across-the-board review so that the best dollar benefits would result for the company. The answer was a full display of all purchased parts in the company cafeteria.

A tag providing part number, description, material analysis, monthly usage, normal buy and monthly usage, normal buy and annual usage was affixed to each part on display. This gave suppliers an idea of how much they might save, and the volume T-R-W would buy.

From March 1 through June 15, purchasing received 135 proposals from vandors. Even though

posals from vendors. Even though the display terminated in August, Portland continues to receive new proposals as well as some revisions of earlier ones.

Each proposal is carefully analyzed; and in the case of potential new suppliers, the financial structure and capability to perform is scrutinized carefully.

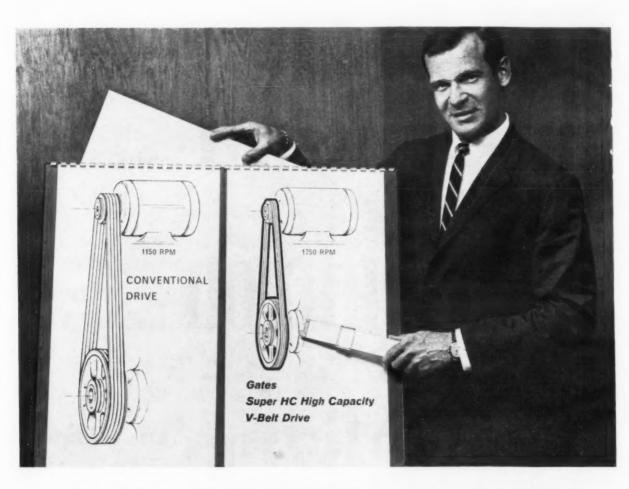
Maintenance of Coolants **Outlined in New Booklet**

Syracuse, N. Y.—Hoffman Industries, Inc. is offering a free booklet that describes how proper maintenance of coolants can eliminate "hidden" metalmetalworking costs. Among the sav-ings cited in case histories of several leading companies are reduction in scrap loss, and lower labor and material costs. Copies may be obtained by writing Fil-tration Div., Hoffman Industries, Inc., Thompson Road, Syracuse 6, N. Y.

Billing Time Reduced

Chicago — Union Tank Car Co. has become the first firm in the industry to use a computer for tank car billing. Officials estimate that the recently installed IBM 1401 computer will enable the firm to perform the billing in one-tenth the time previously required.

Eventually, Union Tank Car hopes to use the computer to keep track of the movements and route its 52,000 tank cars.



How Gates Super HC Drives can save space, weight, money on machines in your plant

Ask your local Gates Man to design a drive for your machine two ways: A conventional V-belt drive and a Gates Super HC High Capacity Drive. A quick comparison will show you that the new Gates Drive costs up to 20% less than a conventional V-belt drive, weighs about 20% less and can handle your power requirement in 3/3 to 1/2 the space.

These advantages are possible because of exclusive, basic changes in V-belt shape and construction that permit this drive to transmit up to 3 times the horsepower of a conventional V-belt drive in the same space.

Manufacturers everywhere have standardized on the Gates Super HC Drive-the first and most advanced High Capacity Drive. It is your best assurance that your power transmission unit will remain up-to-date for many years to come.

The Gates Man, located near you, has had long, intensive training and experience in drive design. Ask your nearby Gates Distributor for his help when you have a drive problem.

The Gates Rubber Company, Denver, Colorado

Gates Super HC Drive Gives you these benefits:

- Saves up to 50% in drive space.
 Reduces drive weight 20% and
- more. Cuts drive costs as much as 20%.
- Reduces bearing load, increasing bearing life.
- Guards can be smaller, lighter weight.
- Belt speed up to 6000 ft/min possible without dynamic balancing.
- Less costly, higher speed motors can often be used.
- Jackshafts and outboard bearings can sometimes be eliminated.





Gates Super HC V-Belt Drives

Stuart Motors Preparing to Market 4-Wheel Electric Passenger Auto

duction on the "first electric four-wheeled passenger car produced in the U. S. in 20 years."

Using conventional lead-acid batteries, the "Stuart" can go about 35 miles before recharging is necessary, according to Barry H. Stuart, president of the firm. A standard 110 v. plug is used to recharge. Standard model of the car for commercial service is priced at \$1,600 plus taxes, f. o. b. Kalamazoo. Delivery is currently quoted at 90 to 110 days.

The valiele is a start produced in the first sonal transportation.

The Stuart has a fiberglass body shell and floor which is rustproof and resistant to minor abrasions. The plastic interior is completely washable. A large package tray is fitted under the dash for personal items.

The new auto is 115-in. long and 64-in. wide. It can be used both for passenger and light commercial delivery work with a minor change in seating. days

The vehicle is expected to find use in meter reading, sales work, route delivery of light items, and

Mid-Atlantic Truckers Ask ICC Approval For Constant Charge Plan

Washington-The Middle Atthe big step last week and filed its controversial "constant charge" proposal with the Interstate Commerce Commission.

The plan similar to one pro-

The plan, similar to one proposed earlier this year by the Eastern Central Motor Carriers Assn., would eliminate all class and commodity rates on ship-ments of 300 lb. and less. Instead, charges would be based on the weight of the shipment and the distance traveled.

Goes Into Effect Nov. 30

The MAC proposal is scheduled to go into effect Nov. 20. The ICC plans to hold a hearing on the ECMCA plan Oct. 30, and it is believed the commissionals of the MAC proposed the MAC proposed to the MAC propo also may consider the MAC proposal at that time.

The ICC had suspended the ECMCA plan for investigation following a series of violent attacks on the proposal by ship-pers, who charged the simplifica-tion in the rate structure merely cloaked another round of increases

MAC, however, claims its constant charge proposal will mean decreases as well as increases on small shipments. A conference spokesman said the

new rates are based on actual cost figures, without profit.

The MAC plan calls for weight breaks at 25 lb. intervals starting at 100 lb. In this respect it is slightly different from starting at 100 lb. In this respect it is slightly different from the ECMCA proposal, which provides for charges to be graduated by 50-lb. steps.

Under the MAC proposal, for instance, the charge for a ship-

instance, the charge for a ship-ment traveling 200 mi. would be \$4.30 if the shipment weighs 100 lb.; \$4.30 for 125 lb.; \$4.70 for 150 lb.; \$5.05 for 175 lb., and so on, up to \$6.95 for 300

New Line of Canned Pumps

Penndel, Pa.-Integral Motor Pump Corp. has developed a new line of canned pumps de-signed for use with radio-active materials, caustic solutions, slur-ries and other hard-to-handle fluids. The firm said its new pumps, which will be sold under the name "Impco" can be used under a wide range of temperatures.

Kalamazoo, Mich. - Stuart service calls, as well as in per-



THE STUART: First four-wheel electric passenger car to be made in U.S. in 20 years is slated to come off the line shortly after the first of next year. Fiberglass car can do 35 miles before recharging.

National Standard Closes Wire Div. Plant at Dixon

Niles, Mich.-National Standard Co. has decided to close the Dixon, Ill., plant of its Reynolds Wire Div. following refusal of the United Steel Workers to accept a wage cut and a three-year mora-torium on salary and fringe in-

James H. Ward, National Standard vice president, said the Dixon operation will be relocated in a new factory to be built in Corbin, Ky. The company had promised to build the new plant in Dixon if the union would agree to wage changes.

The United State of Standards qual

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Transportation Memos

RUCKERS STILL TRYING: The unorthodox terminal-to-terminal truck rate plan—seen by many as the motor carriers' answer to piggybacking—is not dead yet.

A group of shippers and truckers in the central states, led by Ford Motor Co., is flooding the Interstate Commerce Commission with letters protesting the seven-month suspension of the plan by

The new plan would provide for a terminal-to-terminal scale of truckload charges for shipment of auto parts, with the provision that a shipper may mix in other items if he delivers the trailer to the trucker and picks it up at the carrier's destinational terminal. In effect, the trucker would provide only the cab for the road haul, just as railroads provide a flat car for piggybacking.

PROBE URGED: The ICC was urged by one of it's examiners to "take a profound" look into railroad rates, charges and regulations which are designed mainly for freight forwarders.

The suggestion was made in the course of a report on a Pennsylvania Railroad tariff permitting consignors-principally forwarders—to load all kinds of freight by carloads over the carrier's platforms in Chicago. The report recommended that the Commission find the schedules unjust and unreasonable and order them cancelled.

PIGGYBACK FEES HIT: The railroads operating in New York are thinking about supporting legislation to outlaw and make void any provision in a Teamster Union contract that

would impose penalty fees on truckers when they use piggy-

back service.

A bill embodying these provisions now is pending in the New Jersey legislature. Similar legislation already has been passed in Texas and Illinois.

A PUD SQUABBLE: Truckers and air freight forwarders are pitted against each other over the CAB's proposal to extend from 25 to 50 miles the radius of the zones in which air freight pick-up and delivery can be performed without regulation.

The truckers want the exempt areas to be the same size as the present commercial zones in which they may make pick-ups and deliveries without regulation for other motor carriers, railroads

for other motor and forwarders.

Prompted by petitions from trucking groups, the ICC now has decided to hold its own hearman on the subject. The ICC, however, says it will try to cooperate "to the maximum extent possible" with the CAB.

SERVICE CHARGE DE-FERRED: The Traffic Executive Assn. referred to a special committee for further study a pro-posal by Eastern railroads to make a charge of \$5 when a car, which has been loaded for outbound movement, is ordered re-moved from its siding without billing instructions.

Reason for the TEA action was to draft a revised rule which will be submitted to interested shippers for their opinion before final disposition of the proposal.

NEW YORK RATE HIKES: The Middle Atlantic Conference and the New York Motor Carrier Conference are planning a series of rate increases on ship between points in New shipments State.

They propose to boost all arbitrary and accessorial charges 10%. Class and commodity rates also would be raised 10% for shipments of less than 2,000 shipments of less than 2,000 lb.; 8% for shipments of between 2,000 lb. and 6,000 lb.; 5% for 6,000 lb. to truckload weights, and 3% for truckloads, with a minimum increase of 10¢/cwt. Minimum charges would be Minimum charges would be raised up to \$5.80, depending on distance.

WHISTLESTOPS: Moore-Mc-Cormack Lines is calling for bids Dec. 20 for construction of one to six fast cargo ships . . . REA Express opened its eighth "keypoint" terminal for tieing shorthaul truck routes to rail hauls; this one at Harrisburg, Pa. . . . Union Barge Line put a new towboat, the "Navigator," into operation for hauling steel and other commodities on the Mississippi and intercoastal water-ways... The "New Soo" Line RR will invest \$1.3-million in specialwill invest \$1.3-million in special-purpose freight cars for carrying such items as steel billets and tin-plate in rolls . . . Container Transport Int'l, of New York, has set up a regional office in San Francisco to handle traffic be-tween the West Coast and the Far East . . Chemetron Corp. has put out a new brochure de-scribing its Cardox refrigeration system for over-the-road or pig-gyback trailers. gyback trailers.

lamp lines carry ates Bureau ality approval.

approved lines en for nty-five years.

d commercial lighting, not have to pour millions np and appliance merchandising.

ing. It will pay you to scounts with those you are getting other three approved brands.

r. Bill Ferris at our Lynn plant.

Fluorescent Incandescent Infra-Red

P/W Professional Development Competition:

If You Can Solve This Management Problem You Can Win..

Professional Development Case No. I

Jack Smith is the Purchasing Director of a company that manufactures heavy machinery and equipment. His department consists of 20 employees, which is just a little under 2% of the company's 1,100 employees. The total annual costs of operating Smith's department are \$150,000. The department annually buys some \$15-million worth of goods for the enterprise whose gross income is somewhat over \$70-million. Jack Smith feels that this is a very satisfactory performance.

The company's one plant has a central warehouse and receiving department which reports to Smith. He is responsible for inventory control of raw material, subcomponent and MRO inventory of \$5-million. However, Smith is not in charge of materials handling, production scheduling, or incoming traffic, since these functions report to the manufacturing manager.

One day an alert young man presents himself to Smith and says: "I'm a member of the XYZ firm of management consultants. Your company has just retained us to check over its operations—including the purchasing department. My job is to discuss and analyze with you the importance and general performance of your department.

"Frankly, I come to you with a completely open mind. I don't know, for example, whether your department has enough authority or too little. I don't know whether its record is good or bad—or how your internal costs compare with your competitors'.

"My task is to find out from you how you appraise—and justify—what you are doing. I'm sure you'll welcome this chance to go into self-analysis. So would you be good enough to give me a brief in about a week which capsules your operation and makes any recommendations for changes you think are necessary."

If you were Jack Smith, what would you put in this brief?

This is the first in a series of case-problems to appear — at two-week intervals — in PURCHASING WEEK's Professional Development Competition. Entries for each case will be judged separately.

These cases were specially designed for this Competition by P/W Consultant F. Albert Hayes.



For His Contribution to

Professional Development

Thereby present this certificate to

on behalf of

Purchasing Week

and the undersigned board of judges who have approved his solution to advanced problems in the purchasing field.

Donald C McGraw

President McGraw-Hill Publishing Co., Inc.

Arvarded By These Judges



F. Albert Hayes, former NAPA president, v.p.-purchasing at Bigelow-Sanford Carpet Co., Shipman Medalist and Purchasing Week Consultant.



George A. Renard, retired national secretary of NAPA, Shipman Medalist, and author of the Purchasing Week column, "From One P.A. to Another."



William R. Leitch, P/W Management and Professional Development Editor, and winner of Jesse H. Neal Business Journalism Award of Merit.

Here Is What You Should Know About This Competition

Object: To stimulate your thinking on today's broad management problems in the purchasing profession—and properly recognize your alertness.

This Certificate

Eligibility: Any Purchasing man may enter the Competition as an individual; or any Purchasing Department may enter as a team; or any group of Purchasing people may get together and enter as a pool.

Awards: There will be as many awards in this Competition as case problems. In other words, you may submit one entry any time—or every time. The awards themselves are certificates (such as shown above) signed by Donald C. McGraw, President of the McGraw-Hill Publishing Co., Inc., and the three judges. Wherever possible, the winners will receive the awards via the president of their own company who—in every instance—will be notified of their achievement.

Where to Enter: Address your entry to William R. Leitch, PURCHASING WEEK, 330 W. 42nd St., New York 36, N. Y.

Time Limit: Entries must be postmarked no later

than two weeks after publication date of each problem. (For this one, the limit is Nov. 6.)

What to Enter: You should submit an outline of how you would handle the case-problem. The judges suggest that two typewritten pages (double-spaced) would be a good target length. In other words, you should write the judges a memo broadly stating what plan of action you would pursue if confronted with the situation described in the case-problem. Your plan should be original (avoid quoting from books or speeches) and should not include such burdensome detail as specific figures, calculations, etc.

How you will be judged: Obviously, these case problems have no single, pat solution, such as problems in mathematics do. So the shrewdness of your strategy is what counts. (Thus in the problem on the opposite page, be sure to think about the XYZ Company's future sales and profits as they would affect the Purchasing Dept.'s future. This is the sort of consideration the judges will watch for in your answer.)

Finally, there are no tricks or hidden clues in the case problems. Accept them at face value, write your memo accordingly, and good luck.

Cold War, Natural Catastrophies Pinpoint Need for Disaster Plan

New York—Standard Oil of sium sponsored by the National ew Jersey played war last Institute for Disaster Mobilizamonth. It assembled its key staff and operating executives from expected to be devoted to maand operating executives from expected to be devoted to mathroughout the world—including terials and equipment needed for key units from purchasing-at an emergency headquarters at nearby Bayonne, N.J., for an exercise in disaster-planning, in-

officials, will meet at a sympo- war game.

industrial shelters and fall-out

cluding a simulated nuclear at-tack.

And sometime next month about 100 industry leaders, proding department. A typical exded by military and civil defense ample was the Jersey Standard men involved in hurricane Carla.

proven effective in dealing with disasters less cataclysmic than nuclear war. Just before Jersey Standard headed for the hills, the Gulf Coast states were dig-Some companies, on their ging out from the wreckage, mud, and chaos wrought by hurricane The companies that had He shouldn't expect much sleep.

The companies that had He shouldn't expect much sleep.

Paperwork and red tape systematic hurricane procedures fared best.

PURCHASING WEEK drew these notes often provide the only rec-

• The P.A. must be flexible during a disaster, ready to operate out of his hip pocket, a private home, or his automobile. He will be the middle man be-tween harassed operating per-sonnel and apoplectic managers.

must be cut ruthlessly. Every-

In other parts of the country, observations and recommenda- ord for later matching up of or-similar forward thinking has tions: is on expediting; everything else low priority. The probably won't have any clerical help or the facilities for orderly

> Good communications are vital. The P.A. should insist that his company's disaster preplanning include his functions in the charting of a communications system that will work ef-

• The P.A. had better be ready to assume duties completely out-side his normal scope of opera-

tions, such as employee welfare.

In the Jersey Standard test
run, emphasis was more on Civil
Defense than localized natural
disaster procedures. However, the same thinking that goes into Civil Defense can be mobilized to diminish the effects of fire, flood, tornado, and hurricane

Community Disaster Planning

One key technique, evolved from the disaster experiences of Texas City, Tex., and Baton Rouge, La., is maturing and Rouge, La., is maturing and spreading rapidly across the country. S. A. Anthony, of the National Institute for Disaster Mobilization, says that community-wide disaster planning, under the accident of Industrial Mutual der the aegis of Industrial Mutual Aid Councils, is a sensible springboard for a rebound for any disaster-ridden community.

There's general agreement among C-D and Mutual Aid officials that purchasing's role is crucial to rehabilitation work after disaster strikes, but they admit that little has been done formally to prepare guidance. The Mutual Aid Council's first concern, of course, is to save property and lives, and their plans are geared to the first steps of preventing damage and re-storing communication and utility networks.

Purchasing Neglected

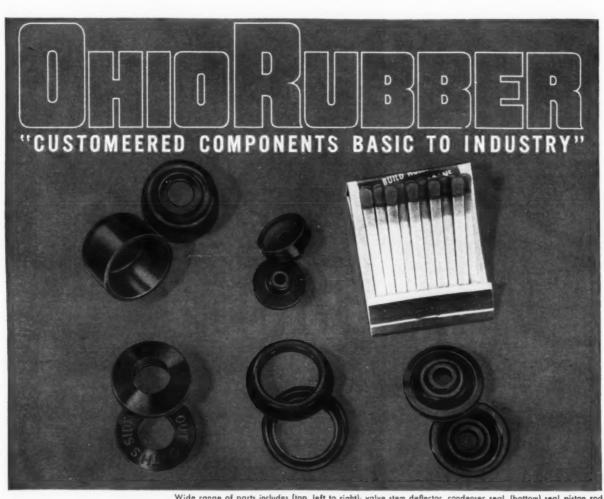
Anthony, "Purchasing Says has been largely neglected in disaster planning. One's own in-plant disaster program can be stymied if suppliers are not geared in. Most plans have overlooked this feest and the Industrial Muand the Industrial Mutual Aid Councils haven't picked it up.

At Standard Oil of New Jersey's exercise, the top brass first had to decide, solely on the basis of information on-hand at emergency headquarters (the problem assumed the nearby New York office was destroyed), how to route ships at sea, set allocate communications. fuel reserves, handle broad manpower problems, and repair dam-

The simulation then put purchasing to the test. Purchasing had to contact vendors and alternate sources without relying on the files available in the home office. It had also to arrange material routing around stricken areas.

Jersey Standard's purchasing department is organized to contact and cooperate with the emergency headquarters of other companies across the country.

Not many companies go to this length in limbering up their mobilization disaster But, feeling the eddies of current world turmoil, many companies



Wide range of parts includes (top, left to right): valve stem deflector, condenser seal, (bottom) seal piston rod

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Precise tolerances within ±0.003 in. are now possible in large volume production of custom-molded rubber component parts. Ohio Rubber's new high-speed, continuous molding process produces such parts at rates of up to 200,000 pieces per day.

Greater precision, which results in important savings on finishing costs, is assured through use of single-cavity self-registering molds. They permit accurate, uniform application of pressure to minimize flash-maintain consistent tolerances for all dimensions Uniform material thickness is equally assured by a plasticizing mill, which as an integrated part of the process directs uniform charges to each mold.

Direct feeding, from the mill to the mold wheel, eliminates the conventional intermediate extrusion step and further insures part uniformity and quality consistent with specifications. The continuous process permits precise control of time and temperature for each part.

Large volume production results in substantial cost savings for small, precision parts requiring tolerances obtainable by other precision molding processes. For parts formed by less precise, conventional methods, performance can be improved through greater accuracy-and without prohibitive increase in cost.

Quantity requirements involving 500,000 or more parts annually are recommended for most advantageous use of the new process. Since two similar parts of different size can be produced simultaneously by alternating the molds on the molding wheel, lower production runs which might not be economical can be combined with a separate order.

Complete information on this revolutionary new process is available in bulletin form. Send for your free copy today. At the same time, be sure to inquire about Ohio Rubber's complete component "Customeering" servicemolding, extruding, and bonding-tometal. Just mention ORCO Bulletin 715.



A DIVISION OF THE EAGLE PICHER COMPANY



now are gearing themselves paper, at least—to cope with war damage. Some of the best organized are companies that regularly have to batten down for natural disasters such as floods, tornadoes, and hurricanes. Also, the utilities, chemical, and petrochemical industries, because of their inherent liability to disaster work and fire, have the most highly polished disaster control plans.

California's Pacific Gas & Union Carbide's Arthur Dunlap says, "There are entirely too manuals, plans, and pro-

California's Pacific Gas & Electric Co., for example, has a decentralized warehousing system with 30-day supplies in 185 stocking points. It also has its vendors keep storage materials for which PG&E is the principal purchaser, even if the materials are not committed to the com are not committed to the com-

pany.

American Oil Co. purchasing people will share, in event of war, a temporary company headquarters in Wisconsin with other executives. A group of six P.A.'s are tabbed to go to the emergency center immediately in case of an emergency. And Monsanto Chemical Co. has a company-wide disaster plan, with a vaulted "vital records center" in a re-mote location. It also encourages its divisions to ioin Industrial its divisions to join Industrial Mutual Aid Councils.

Hurricane Carla

When hurricane Carla inundated the Texas and Louisiana coasts last month, Weather Bureau reports on her location and movement aided immeasurably in reducing damage, permitting

orderly plant shutdowns.

At this stage, there was little the P.A. could do, other than see that emergency crews were supplied, and make sure inventories were stabled and make sure inventories. tories were stocked and pro-tected as well as possible. Many notified their suppliers in ad-

notified their suppliers in advance, and halted shipments.

After Carla's rains and winds abated, the P.A.'s found themselves on an around-the-clock treadmill, trying to locate and distribute everything from 5,000 volt cable to squeegees.

At Monsorto Chemical Co.'s

At Monsanto Chemical Co.'s Texas City Plant, Harry Lanser, purchasing agent, set up tem-porary offices in a Houston home as the storm careened toward the coast. This move placed him in closer contact with vendors, permitted him to avoid tving up the

plant's communication network.

Monsanto's emergency control center, at the plant, passed on requests to Lanser, which he consolidated and ordered from his "office." At first, these requests were for such items as cots and mattresses, drinking water, clothing, walkie-talkies, and groceries. Lanser got commercial trucking firms to deliver the supplies during the storm.

Help at Home

Afterwards, Lanser procured and made up cleaning kits for plant personnel to use in their own homes. Then, he swung into an unusual job: employee wel-fare and rehabilitation. His staff tracked down and told employees where to obtain critical home services and supplies, and published a price list to combat scalpers. His department, working through Monsanto's St. Louis purchasing organization, arranged to have large electric manufacturers establish emergency appliance repair centers to care for home equipment damaged by the floods.

Just as in the history of air-plane traffic rules, plant safety

perience. No plan can foresee the complex and unique problems that attend a disruption of normal routine. There's also a human tendency to assume that, once a few paragraphs are down in a manual, the job's done. In fact, many men who work with disaster control feel that simplicity—in organization and produces is a paramount virtue.

on regulations stem trom bad export try to spell out in detail what war perience. No plan can foresee everyone will do. His plans everyone will do. His plans should be geared to a list of critical materials and alternate sup-

ply sources."

Virgil Couch, director of the Industry Office of Civil Defense. Defense's Office of Civil Defense, Battle Creek, Mich., says, "In case of disaster or attack, the procurement man's job is to be sure there's a source of supply. Emergency planning must be a part of the P.A.'s job as long as danger exists. He must also know about substitute materials, for the first consideration after for the first consideration after saving lives is getting back into The purchasing man must do his own contingency planning, but usual quality level."

Checklist for Disaster-Planning

Here are some questions to ask yourself to determine whether your plant is ready to cope with such emergencies as fire, flood, hurricanes, or enemy attack:

• Records: Have you duplicates of your vital paperwork? Could you operate tomorrow if your home office files were

destroyed this afternoon?

• Supply Sources: The need for multiple sources of supply is obvious. But are you sure you can get what you need for many the supplementations. from more than one source, in

more than one community? Do

more than one community? Do
these suppliers know you?
Could you get in touch with
them in case of an emergency?
Survival Gear: Has your
company systematically bought
any of the myriad nuts-andbolts items required for mopup and personnel safety?

• Communications: Do you

know your exact place in the chain of disaster command? Normal working relationships and prerogatives are out the window until the job's done. Usually control must be vested in one man.



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Houston Perspective of America."



Science in the Southwest the edge.

By Glenn Green

P/W Correspondent

blast off of a new growth cycle for the Houston-Dallas-Ft. Worth plies, began as satellites to the petroleum industry, but are rapidly area. Boosters for the Southwest science complex say that NASA diversifying into electronics and other lines. And development of

with its \$20-billion man-on-the-moon program, Project Apollo regional producers of basic steel, will "... eventually make Houston one of the top scientific centers

Already optimists-and it's hard to find a pessimist in Houston these days—are coining new slogans for the city. At the moment, "The World's Space Center" or some variation of it seems to have

But publicity efforts to orbit Houston into the missile age tend to overshadow the broad-gauge industrial growth that has occurred pliers. in the past thirty years.

The Houston-Dallas-Ft. Worth triangle isn't strictly an oil and gas economy, though of course the petrochemical industry The selection of Houston as the site for the \$60-million National and other chemical products are directly related. Much of the supporting manufacturing, such as oil field equipment and sup-

aluminum, and raw materials can be credited to the Houston Ship Canal and excellent port facilities

Those instrumental in bringing NASA to Houston predict that the Space Age will spawn a whole new complex of highly-technical firms in the region, much as the oil brought forth a host of sup-

Rocket-related industries such as electronics, precision finishers of exotic metals, and a variety of R&D labs will be needed to support NASA and its prime con-tractors. Aerojet General and other large-booster system producers have made site surveys in the Houston area, according to G. K. Johnson, president of Ling-Temco-Vought, Inc., Dallas, it-self an Apollo bidder. The NASA lab will be built

on a 1,000 acre tract on Clear Lake, 22 mi. from downtown Houston, and is to be the Apollo command center, concerned with the research and construction of the Apollo spacecraft, subsystems, training of crews and later manned space flights.

The first 800 NASA employees will be moving in soon, and there will be 1,600 the first year, 2,500 the second, and 3,500 the third year. The payroll will run about \$17-million. All told, Apollo is expected to be about a \$20-billion program, with some 5,000 industrial concerns participating. And federal space appropriations are expected to total \$50- to \$60-billion during the next 10 years. From this point on, the sky is no limit on what the development will lead to.

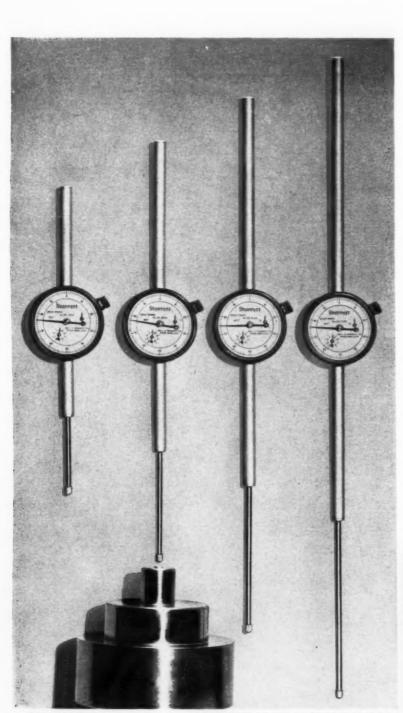
Electronics and manufacturing firms in the Houston area, by and large, don't see any immediate expansion or build up of supporting facilities as a result. But the down-the-road prospect is a different matter. The clue here is, very simply, brains.

A man who was deeply involved in the bringing of the NASA center to Houston told PURCHASING WEEK, "Regardless of the dollar signs, the finest development that will come out of this program will be the movement that of the bight advected. ment here of the highly educated, scientific, wonderful people in-volved in the project. They will enrich the community."

A spokesman for a large electronics company in Houston pointed out that this type of company can locate anywhere-it doesn't need natural resources, much in the way of transporta-tion, and so on. But it must be able to attract the highest type of scientists, engineers, and technicians. These people like to locate near universities offering advanced work and pure science facilities.

Rice Institute, the University of Houston, Texas A&M College, and other colleges will help attract top-flight men, and elec-tronics and related industries will follow, he explained. The Graduate Research Center planned for Dallas is aimed at producing Ph.D's at the rate of 2,000 per year by 1975 from 17 Southwest colleges. This could help im-measurably to push the Southwest far ahead in the space development field.

Just where it will all end no one can predict. But Houston's previous experience indicates that the development will spread into





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dial indicators With these new Starrett long range With these new Starrett long range dial indicators, you can measure with continuous accuracy over ranges of up to five inches. Direct reading count hands and double dials let you read any dimension within the full range directly in thousandths of an inch... making them ideal for production measuring on boring machines and similar machine tools, as precision stops on lathes and for jig and fixture work and other long range gaging.

Available in 12 catalog models covering ranges of 2.000", 3.000", 4.000" or 5.000" — each in a choice of indicator dimensions conforming to A.G.D. specifications, groups 2, 3 and 4, except for range and stem length.

except for range and stem length. Your nearby Industrial Supply Distributor can supply Starrett high precision-low friction dial indicators in 144 models to meet every requirement — plus dial test indicators, dial comparators, bench gages, bore gages, portable hand gages and inside dial gages. A specialist in prompt, dependable service, he'll give you quick delivery on any of the 3500 quality products in the complete Starrett line. Write for Catalog No. 27, The L. S. Starrett Company, Athol, Massachusetts, U.S.A.

Those most closely involved with the project and those with concerns in the Houston area that are most likely to become involved see this sort of economic pattern emerging from the NASA development:

- Even before the four-building, integrated lab is built, NASA personnel will be active in a "start-up" phase. Representatives of various firms, large and small, interested in future contracts will start stopping in Houston, rather than just passing through.
- Eventually, they will establish local sales offices in Houston. Later on, as the program gets into high gear—and as the "scientific climate" develops—firms with a direct interest probably will start to build facilities in the area. Those that are here, of course, will find it easier to "operate in our own backyard."
- Most of these sources don't see much in the way of direct procurement coming from the NASA lab. But it is highly important to firms interested in eventual contracts to be "in tune" with the thinking of the NASA research and development personnel so that they can aid in the R&D thinking and be ready to bid on a requirement which may evolve months or years from

But the educational institutions, the medical facilities, the oil, gas, chemical, electronics, and manufacturing establishments all have strong research labora-tories and staff to provide NASA with a base in being for the sup-porting, outside research and development work it must have inevitably.

Added to that is the area's large and skilled technical and work force, a wide variety of fabricating and manufacturing facilities, and flexible transportation availability. tion availability.

Oil and gas development first took Houston out of the "small city" category. It now has the world's largest refinery complex —the 30 refineries in the general area can process 25% of the country's entire petroleum needs and represent \$1.2-billion in plant investment. More than 75% of the U. S. petrochemical capacity is located near Houston or in the adjacent Gulf Coast area, with some 90 plants producing 290 organic and 80 inorganic chemicals.

Metropolitan Houston's manufacturing structure grew from the oil and gas industry foundation. It now accounts for about 39% of the nation's production and marketing of oil tools and equip-

This apparent dependency upon oil and gas disturbed some of the city fathers until the recent decline within the oil industry. They are not so worried now. During the past three years of petroleum industry recession, Houston's employment went up 12%, with 64,960 more jobs at the end of 1969

Actually, Houston's manufac-turing industry has been growing

are now, for example, 56 primary metal products plants, 245 engaged in fabricated metal prod-ucts, 265 in machinery other than electric, 48 in electrical machinery and equipment, 108 involved with various kinds of durable goods, 65 in transporta-tion equipment, 201 in food and related products, 11 in textile mill products, and 60 manufac-turing apparel and finished products. And Houston has the largest integrated steel mill west the Mississippi—the Sheffield Division of Armco Steel Corp. Aluminum and magnesium plants

are located nearby.

areas that are only dimly visible away from the petroleum industry influence for some time. There are now, for example, 56 primary

Center here in a move to streamline purchasing and gear for the demands of the Apollo moon

shot project.
The 36 procurement officers studied changes in the types of contracts NASA administers in an effort to find ways to reward suppliers who hold down costs or improve on reliability.

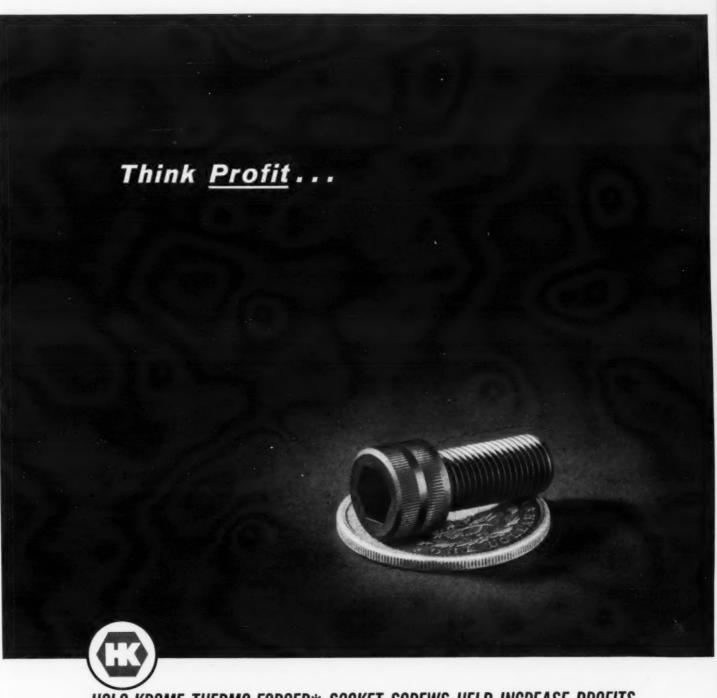
"So far the agency has used ly cost-plus-fixed-fee conproblem of standardizing prowhole," said Biggs. only

ing our first incentive contract now

The conference also discussed degree of dollar investment NASA should make for research and development in private companies.

Cleveland—Top-level procurement officers of the National Aeronautics and Space Administration met at Lewis Research tracts," said John R. Biggs, chief of procurement and supply at Lewis, who acted as host at the meeting indicated that there are meeting. "But we are contemplation with tracts," said John R. Biggs, chief of procurement policies of the large, of procurement and supply at Lewis, who acted as host at the meeting indicated that there are move wide variations in policy from one office to another

For instance, Biggs said, one office reported that in evaluating ways in which NASA can aid small business in getting more defense contracts, and studied the fice, on the other hand, figured the cost factor at about 10%. "In this case each office probably will have to compromise a bit in order to arrive at a stand-Another major topic was the ard policy for the agency as a



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Join other profit-conscious industrial leaders in taking a long, hard look at the profit-eating costs of inspection rejects and in-warranty service. You'll see why they're turning to quality—in materials and components—to reduce costs and increase profit. Holo-Krome's exclusive Thermo-Forged process produces socket screws of unmatched uniformity and quality... virtually free from flaws and hidden imperfections. Next time you order socket screws, think of *final* cost *first*. A few extra pennies spent

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on quality will save many hundreds of profit dollars by reducing the high cost of inferior fasteners.

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Follow-Up: Letters & Comment

Prices and Competition

Pittsburgh, Pa.

Over the past several months, I have been doing a "slow burn" while reading articles in trade regarding the evils of papers price cutting.
Usually the purchasing agent

profit-and-loss economy? uct and Management has been talking in arms. great deal about the lack of general understanding regarding "profits" and the need for profits in our free enterprise system. The offer a lower price; this only berole of "competition" is just as important in this same economic system and just as thoroughly

IT WILL PAY YOU TO BE UP-TO-DATE

old American private-enterprise accept a lower price on any product and the whole industry is up

> According to all the claims we see in the trade papers, it is per-fectly all right for a salesman to is just as comes a crime when someone agrees to buy at the lower price. And who is the criminal?—the

or buyer is criticized for encouraging price cutting. What's all this noise about price cutting? What is free enterprise? Where did it go? What is competition? What happened to the good system and just as thoroughly purchasing agent. The dastardly deed is done when the conniving buyer tricks the poor salesman into accepting agent. The dastardly deed is done when the conniving buyer tricks the poor salesman into accepting agent. The dastardly deed is done when the conniving buyer tricks of this country were not afraid of competition. Now let someone on the road to bankruptcy.

He had it when he came into the buyer's office-from his superior.

We are cautioned to be sure the supplier is operating at a profit before we accept his low price. When prices are on the upswing (as they will be again), does the salesman check on our ability to pay the higher price and still operate at a profit?

I have never been asked that question. In the great majority of cases, we do not see the sales-man—the notice of price increase comes in the mail and we cannot argue the point with the mail-

There has been more price

Where did the salesman get cutting than usual over the past e authority to quote the price? dry spell, but actual occurrence had it when he came into the no doubt has been multiplied many times over by salesmen using this alibi for loss of an order.

I expect the sales department of my company to get the highest price possible for our prod-ucts and still be competitive ucts enough to get our share of the market.

On the other hand, our sales department has the right to expect its purchasing department to pay the lowest possible price for quality materials and supplies going into those products, so that somewhere between these two points (after labor is added) there is generated that necessary spread which we call "profits." Evidently it is *prima facie* evi-

dence of a black sheep in the industry if someone offers a lower price. The culprit is convicted without any thought that he may have found a lower cost way of producing the item—or his over-head is lower, or any one of a number of reasons that used to be the main-spring of our well production.

The present day market place sees too many of our sales people operating on the false theory that fair competition means getting or holding business through:

Reciprocity Friendship Entertainment

Evidently lowering your costs and reducing your price will en-danger the framework of our whole economy—besides, it isn't

fair.

We agree, there are some unethical wheelers and dealers on the prowl during good times and bad, but why should the aggressive legitimate operators be condemned for the good management of their company?

I am convinced this pioneering good manager is our only hope in keeping our whole economy competitive in world markets; he is in need of all the support we can

give him.

It isn't too difficult to separate the rascal from the ethical and as long as I am charged with spending my company's money to the company's best advantage, I am willing to listen to all offers: Come one— and ride in. -Come all—Saddle up

James A. Callahan Purchasing Agent Pittsburgh Steel Co. Pittsburgh, Pa.

Rx: Self Examination

Little Falls, N. J.

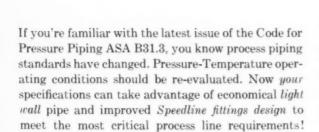
Many purchasing agents from time to time do not like to hear themselves publicly, or construc-tively, criticized. We only want to hear the nice things about ourselves

The only way that we can get ahead and review our faults is by the constructive criticism others have to offer.

I have just finished reading your latest issue and was looking through your "PURCHASING WEEK Asks" column and I decided that I would like to ask "Are you really the purchasing agent in your plant?"
What is the size of your com-

pany? How many employees are in your department, reporting directly to you? To whom do you report? What are your limitations of buying authority? Do you have complete or partial control over advertising, capital expenditures, (Continued on page 43)

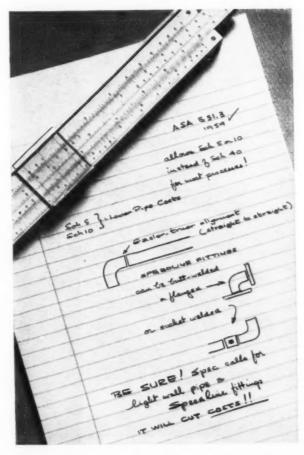
PROCESS PIPING STANDARDS HAVE CHANGED



Once you "up-date" your specifications via this new code, important cost savings follow down the line. Savings in materials cost are definite-Schedules 5 and 10 stainless pipe simply costs less. Speedline fittings design accounts for significant additional savings in the total installed cost.

The Speedline "extra length" feature makes it easier to butt-weld joints . . . assures faster, truer alignment every time because connections are always made "straight to straight". All types of flanged connections, too, can be made more readily . . . without fouling problems-even welding can be eliminated with Speedline Insert Flanges-just roll them on.

Speedline's design advantages give complete freedom of choice-you can butt-weld, flange, socket weld or use unions . . . and one fitting can be used all ways when Speedline is specified.



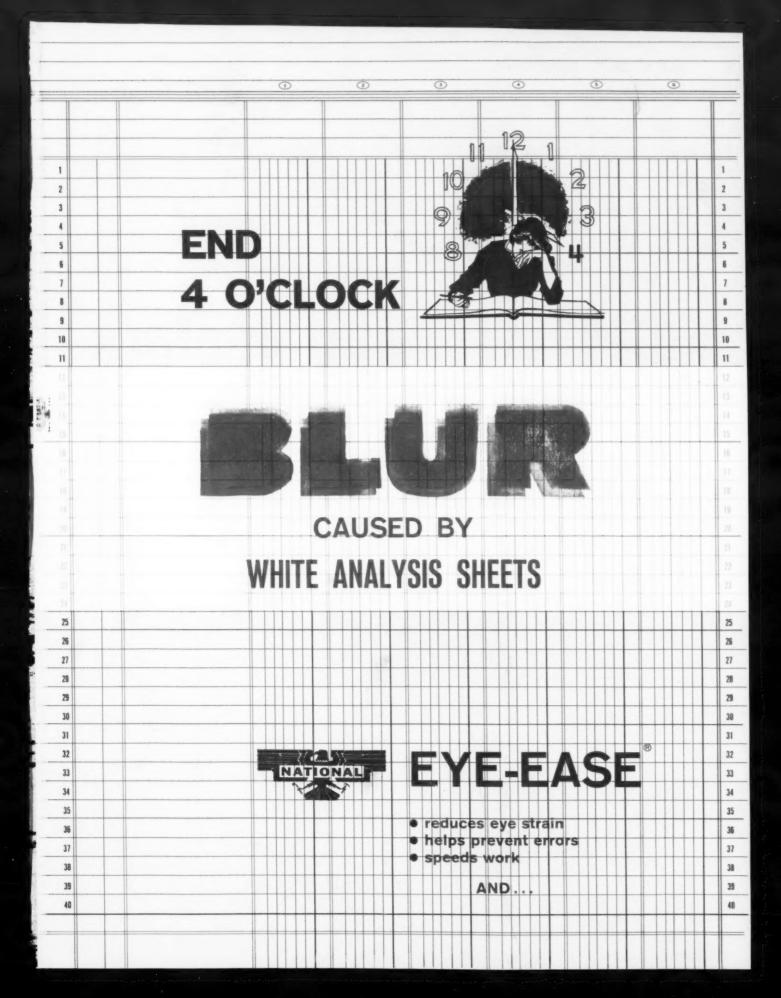
Real economy in process piping is a matter of specifications-and Speedline fittings. Make the most of both. Study ASA B31.3-1959 for up-to-date data on light wall lines for your application. Get detailed data on bonus savings possible only with Speedline corrosion-resistant fittings. The Speedline Distributor near you is listed on Page 1494 of Chemical Engineering Catalog. Call him today.

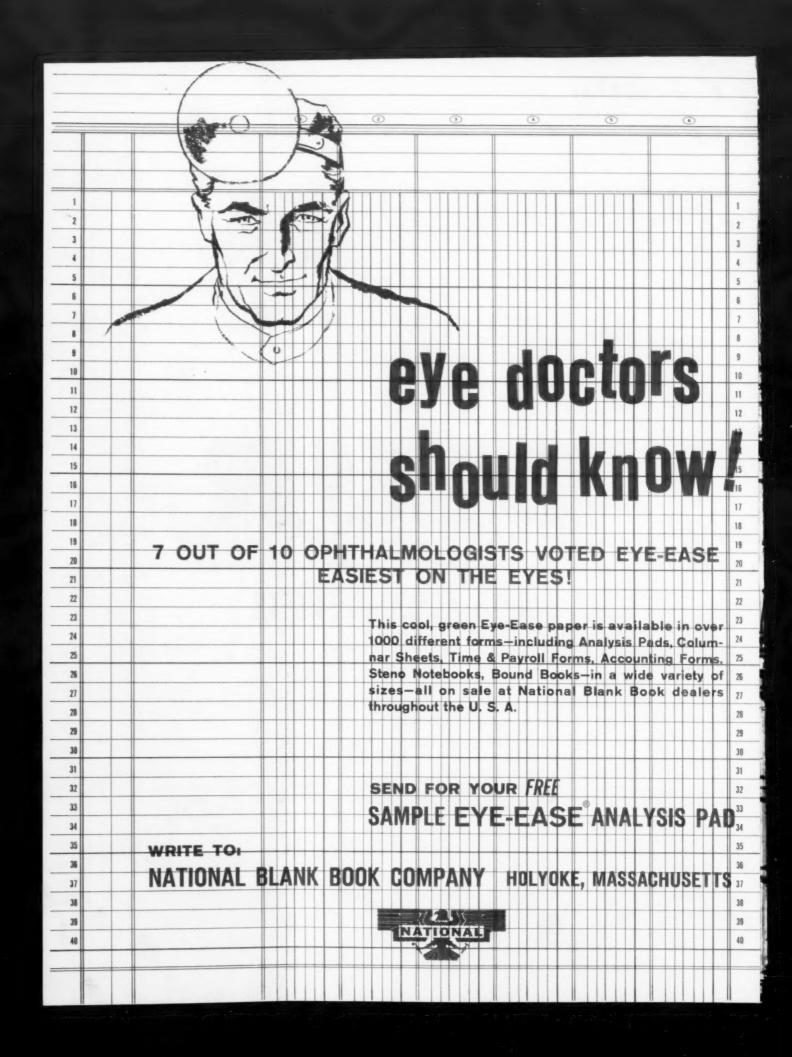


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Follow-Up: **Letters &** Comment

(Continued from page 40) stationery, tools, maintenance, and production items?

Do all vendors clear through your department? What percentage of commitments are made by others—corporate officers, managers, supervisors? Do you interview in the lobby or extend the courtesy to each visiting salesman and invite him into the department for an interview?

Do you control or approve petty cash spending, or do you know the dollar amount of this petty cash spending or how much of it might be eliminated to by-pass the purchasing department?

Is your department a profit-making function and do you record the savings and profits and pass them along to management so that you may receive the proper recognition?

Do you have a formal or in-

formal educational program and do you request that management subsidize these educational programs for buyers?

Do you have a formal or in-Do you have a formal or informal purchasing policy, regardless of how small your company is? Is this policy approved and signed by no less than your president or executive vice-president?

Do you meet with your staff once a week and give them facts

To Our Readers

This is your column. Write on any subject you think will interest purchasing executives. While your letters should be signed. if you prefer we'll publish them anonymously.

Send your letters to: "Follow-Up," Purchasing Week, 330 West 42nd St., New York 36, N. Y.

pertinent to the operation of your organization which they should know? Do you submit a report to management monthly, quarterly, or annually? Have you in-sisted that management allow you to work on a budget so that you know what the actual operating expenses of your depart-

Do you make your own decisions, or do you call your colleagues in and make your decision unanimous? Do you insist that your visiting salesmen are afforded the same courtesy and treatment you would expect your company salesmen to receive when visiting other plants?

Are you progressive in your thinking? Are you using blanket orders, agreements, etc. for the best interests and advantage of your company? Do you question requisitions when you receive them if the quantity is too little or too great, depending upon the

best buy that you can make?

Do your buyers have time to visit their vendors' facilities or even make periodic trips through your own plant, or are they so over-burdened with paperwork that they can't take advantage of these visits?

Do your buyers value analyze or question the value in the prod-ucts you are buying, or take recommendations from your suppliers to lower costs?

Are you a member of your local purchasing agents associa-tion and do you take an active participation in its meetings?

If the answer is "yes" to the majority of the above questions, then you are really the purchasing agent in your plant.

and the "popular" thing to do is regard "only \$16-million" as a percentage of the over-all.

However, since you are pubagent in your plant.

H. M. Zimmermann

Director of Procurement Kearfott Div. General Precision, Inc.

Big Spending

Danville, Illinois

I hope you were joking when ou printed this statement in Washington Perspective" (P/W,

Of course, you were writing of a new government relief grant,

lishing a newspaper for purchasing people, you should realize that a few of us—at least—look

Governmental Purchasing at hard bucks as well as percentages

If this statement would have been uttered by government economic advisor, it could be believed that it was intended to be a serious remark.

Purchasing Agent Lauhoff Grain Co.

Our Washington Perspective is written by our reporters in Washington, who undoubtedly no longer can read figures involving

GE Revises Motor Dept.

Schenectady - General Electric Co. has merged its Small Integral Motor Dept. in Ft. Wayne, Ind., with its Small (AC) Motor and Generator Dept. here Green Bay, Wis.

Can you send me a reprint of page 23, Oct. 2 issue ("Joint Purchasing Policy Taking Shape in Oregon").

I am very happy to the properties of the marketing of a more complete line of motors and generators."

The company happy to the properties of t

"Washington Perspective" (P/W, Sept. 25, '61, p. 4): "The amount involved is small—only \$16-million."

But to be published by Purspace being devoted to governmental purchasing in your fine weekly. Keep it up.

CHASING WEEK, please tell me you were joking.

Wayne E. Linn

Tail very nappy to see more space being devoted to governmental purchasing in your fine weekly. Keep it up.

Russ Petreat

Sign, development and mander facture of general-purpose and hermetic motors in the general range of 1 hp. to 5 hp. The unit of Schenectady builds a.c. motors Purchasing Agent City of Green Bay 125 hp. range.



NON-PRODUCTIVE FLOOR SPACE...

rent collector in cost of possession

Dust sifting softly down on idle steel stocks . . . the costly silence of inactive dollars "invested" in idle steel . . . "rent" for space that isn't producing anything.

Here's a solution . .

Use the complete stocks of your nearby steel service center just as if they were your very own. Their convenience and availability are augmented by other economies, too. Plus first-step processing services your center is able to provide.

Your production and cost accounting people may want to figure the true cost of steel stocks. Ask your steel service center salesman for the booklet, What's Your Real Cost of Possession for Steel? Or write to Steel Service Center Institute.

COST OF POSSESSION . . . to determine your own cost of possession for steel in inventory, consider all these factors:

Cost of capital: inventory, space, equipment

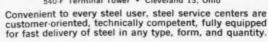
Cost of operation: space, material handling, cutting and burning, scrap and wastage

Other costs: obsolescence, insurance, taxes, accounting

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Moderate Rise Seen in Near-Term Interest Rates

limiting any near-term rise to very modest proportions:

• Monetary policy—All indications point to continuation of the current easy credit policy, with the nation's money managers supplying as much money as needed to sustain the current

 Limited capital expansion needs—Still burdened by over-capacity and hoping for better tax treatment next year, corpora tions are not borrowing too much long-term money to finance new projects

• Slow inventory accumulation

—The demand for short-term funds for this purpose has been well below expectation.

The role of inventory caution is spotlighted by one bank economist who notes: "Interest rates track inventory changes quite closely. And there's little doubt that the lag in industry stock building has been one of the major reasons why short-term rates haven't gone up."

All the experts agree however.

All the experts agree, however, that tight inventory policy couldn't have done the job alone. They note that the most important factor in keeping money rates low in this recovery, as compared to the recent one, is the policy of the Federal Reserve Board (FRB).

Throughout the current up-swing, the FRB has kept member banks plentifully supplied with lendable funds. That's in sharp contrast to the 1958 recovery when the FRB moved very quickly to tighten available bank credit.

The FRB executes its policy primarily through buying and selling government securities in the open market. By selling these securities as it did in 1958, the board drains off the excess funds of the member banks that purchase them. By buying them, the FRB provides the banks with more money to lend—that is, free reserves.

Biggest One-Week Volume

How strongly the FRB has been enforcing its easy money policy is seen from the fact that early this month it completed its biggest one-week volume purchases of government securities of the past 10 years.

The accompanying chart tells the story. Seven months after the current upswing, free reserves of member banks are still hovering around the \$500-million mark. In 1958, the corresponding 7 months saw free reserves dwindle from \$493-million to \$20-million.

The big reason sparking the shift in FRB policy: In this recovery inflationary forces are much less evident than in the last. A key FRB policy is to cut down the money supply only in periods of active or threatened inflation.

The trend toward easier money applies to long-term interest rates as well as short-term. True, they have moved upwards, but very sluggishly. Yields on AAA cor-

tember period.

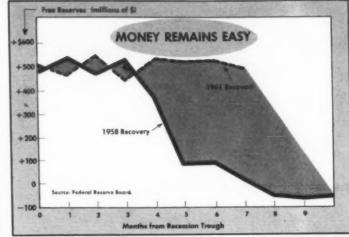
"It's not unusual for corpora- momentum in 1962.

New York—No sharp rise in interest rates is likely, despite the brisk fall business pickup. That's the consensus of top financial analysts who see these factors limiting any near-term rise to very modest proportions:

New York—No sharp rise in porate bonds, for example, have gone up only ½% on the average from their February low of 4½%. At the start of the 1958 business upswing they went from 3¾ to 4½% in the June-September period. mber period.

But even with so many factors and the first half of 1962 might operating to keep credit easy, a rise in demand for money should eventually firm interest rates. And that's what the financial community expects to happen.

"We're not wavested for corporate momentum in 1962."



October 23, 1961



a quick quiz

... to help you determine if you are getting the most for your metal finishing dollar.

ESB, Sun Oil Co. Join ent times lies in portable applications having moderate elec-In Fuel Cell Research

Philadelphia — Electric Storage Battery Co. and Sun Oil Co. have signed an agreement to exchange research information and producer of construction mathematical producer of construction mathematical producer of this year,

trical requirements, Sun Oil said.

Erie Strayer Looks West

cooperate on development of fuel cells.

Fuel cells, unlike conventional

Mfg. and Sales Office in San tions, the result of a survey made Fuel cells, unlike conventional electric generators, convert chemical energy directly into electricity. They do this without a "heat energy" cycle and at a higher efficiency than is possible with internal combustion or steam engines and stationary power plants.

Greatest potential at the pres
Mfg. and Sales Office in San Francisco. The firm said some products sold by the new office represent a continuation of the recovery in manufacturing which specifications by West Coast companies. The manufacturing got under way early in the year. If expectations are realized, sales in the last three months will lower freight costs and faster total \$96-billion on a seasonally delivery times for customers in that area, Erie Strayer said. Greatest potential at the pres- that area, Erie Strayer said.

Survey Sees Sales, Inventories Up in 4th Quarter

additions to their inventories in

higher than actual sales of \$92-

Manufacturers | billion in the second quarter. Ex- | \$55.7-billion at year's end is also expect higher sales and further pansion of inventory book values anticipated.

Manufact

pansion of inventory book values anticipated.

Manufact

Manufact seasonally adjusted rate of four-fifths of total factory stocks

Manufacturers holding about

Table of Inventories and Sales

The following table shows manufacturers' seasonally adjusted anticipated inventories and sales, in billions of dollars, at the end of each of the four quarterly periods of 1961:

	ACTUAL		ANTICI	PATED
INVENTORIES	1ST Qtr.	2ND Qtr.	3RD Qtr.	4TH Qtr.
	53.3	53.4	54.6	55.7
	87.2	91.8	94.9	96.3



Check your answers to these three important supplier questions. Then, compare what you when you buy from Allied Research

PRODUCT VALUE	SERVICE	KNOW HOW
Do I get the results I want at	Can I get the kind of service I	Does my supplier know n
the lowest possible cost? Always	want — where I want it — when I want it?	industry's finishing requir ments?
	Always	Always
Sometimes	Sometimes	Sometimes
	, settom	Seldom
Whether you want quality or	Allied provides a nation wide	Allied has years of experien
economy there's an Allied	network of sales engineers and	helping customers establi
Research product designed to give you the best finish for the	warehouses — service men and laboratories. Prompt product	quality finishing standards. T
money. Specify your chemicals,	 laboratories. Prompt product delivery or expert help is as close 	personal or many remove pr
equipment, or supplies for better	as your telephone. Check us out	
finishing from this list:	on promptness. Call your Allied	
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ARP®		
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WAGNER	e Guior	
electroplating equipment		Appliance
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chemicals and supplies.	•	• Hardware

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Affiliated operations in principal countries

regarded their end-of-June inventories as "about right" in re-lation to their sales and unfilled orders position at that time. Those with 16% of total stocks classified them as "high," while only 1% regarded their inventories as "low." The proportion of manufacturers that considered their inventories "high" was about the smallest in the four years in which the Commerce Dept. survey has been conducted.

Most See Increases

Virtually every major manufacturing industry anticipated an increase in stocks during the remainder of 1961, after allowing for usual seasonal movements. Two-thirds of the expected increase is accounted for by the durable goods industries. Soft goods inventories are expected to increase by \$500-million during the second half of this year to reach a record book value at the end of the year.

The durable goods group also expects to enjoy the larger sales increase during the balance of the year. The advantage of the year. The advance in sales from the second to the fourth quarter is expected to be about 7%, or about double the expected relative increase forecast by soft goods producers.

Suits Dropped Against 11 of 17 Defendants In L.A. Price-Fix Case

Los Angeles-The Los Angeles Dept. of Water & Power dropped the names of 11 com-panies as defendants in a damage suit brought against electrical equipment manufacturers in federal court here.

A spokesman for the department said the names were eliminated in order to make a "cleaner-cut, tighter, less complicated suit" against the six remaining firms. Purchases from companies dropped were negligible during the critical period of the alleged price-fixing con-spiracy, he said.

The department won the right

to drop the names of some of the defendants over the objection of General Electric Co., which told the court that a public body has a duty to act reasonably and without caprice. The Federal judge, however, ruled that there no basis for the GE complaint.

Constructs Gasoline Plant

Houston-Continental Oil Co. will construct a natural gasoline plant in the company's Sacatosa field in Maverick County, Tex. Plans call for the facility to be able to produce 18,000 gal./day of propane, butane and gasoline.

Comparative Prices of Selected Materials

	Co	st		Co	st
	\$/lb.	\$/cu. in.		\$/lb.	\$/cu. in.
Polyethylene resin	\$.27535	.00910120	Cellulose propionate	.62	.0271
Polypropylene resin	.4245	.01370147	Ethyl cellulose	.72	.0286
Acetal resin	.65	.0334	Polycarbonate resin	1.30	.0563
Acrylic resin	.55	.0234	Chlorinated polyether	2.50	.1262
Nylon resin 101	.98	.0404	Magnesium AZ-91B	.3725	.0243
Nylon resin 42	1.08	.0445	Aluminum 360 ingot	.256	.0248
Nylon resin 31	1.26	.0495	Aluminum A380 ingot	.269	.0266
Polystyrene — general purpose	.180*	.0069	Zinc SAE-903	.1375	.0327
Polystyrene — high import	.275*	.0104	Brass — Yellow (#405)	.275	.0845
Modified acrylic resin	.465	.0188	Brass — 85/5/5/5 (115)	.32	.1011
ABS resins	.4760	.01800234	Steel - CR Alloy (Strip & Bar)	.0915	.02550424
Polyvinyl chlorida	.25254725	.01210217	Steel — Tool — Standard 0.95C	.33	.0931
Cellulose acetate	.44	.0202	Steel — Stainless 304 (barstock)	.4675	.1337
Cellulose acetate butyrate	.62	.0267			

^{*} Some firms quoting .19¢/lb. for general purpose and 281/2¢/lb. for high impact.



No doubt your problem is different from the ventilation "hot spot" above. But if it can be solved electrically, your Graybar man is *interested*... qualified to *help*... and has the *right product* to match the

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ELECTRIC COMPANY, INC.



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Metal Prices Drift Downward While Plastics Hold Firm

New York—Price relationships among key materials are shifting. That's the picture revealed by Purchasing Week's new quarterly price comparisons which shows a downward drift in metal prices—as compared with virtually stable plastic tags.

Price movements occurred for only two of the volume plastics in the accompanying table. In polystyrene, a number of companies raised all grades and colors by 1¢/lb., but others haven't gone along—notably Monsanto, which has not changed quotes for natural polystyrene or the high impact grades.

In polyethylene resins, the third quarter saw a narrowing of the price range covering different compositions of the material. Low density polyethylene tags have been upgraded to $27\frac{1}{2}\frac{e}{e}/1b$. from $26\frac{e}{e}$, while falling differentials for special composition polyethylene copolymers have dropped the top end of the range from $39\frac{e}{e}$ to $35\frac{e}{e}/1b$. Polypropylene, the newest of the volume plastics, has devel-

Polypropylene, the newest of the volume plastics, has developed a price range in recent months as new compositions have entered the field. Tags now range from 42ψ to $45\psi/lb$, replacing the single $42\psi/lb$ price that reigned at the end of the second quarter.

Among the metals many recent price cuts have occurred. Most notable was the downward revision in aluminum product lists following the 2¢/lb. cut in 99.5% minimum purity ingot. The two widely used alloy ingots —360 and A380—were cut approximately 3% each.

Die casting zinc alloys also fell by ½ ¢/lb. reflecting recent weakness in prices of special zinc grades.

Stainless steel prices have been under pressure too. While most products — including the bar stock listed in the table—did not change, some price cuts did occur. Stainless steel plate, for example, recently fell $3\frac{1}{2}\frac{e}{r}$ lb. lb.

Prices of other metals—especially magnesium—which have shown no list change, are much less secure at current levels than they had been before the aluminum drop.

N&W Planning to Build 1,000 Giant Coal Cars

Roanoke, Va. — Norfolk & Western Railway announced plans for building 1,000 more 85-ton coal hopper cars.

Work on the project will begin as soon as the railroad's yards finish with a current 1,000-car order. When the new project is completed in the summer of 1962, the railroad will have 3,000 of the extra-large cars. Stuart T. Sanders, N&W president, said the new cars, which have said the heavest wheels

Stuart T. Sanders, N&W president, said the new cars, which have roller-bearing wheels of 36-in. dia.—3 in. larger than standard—are unique among American Railroad equipment for carrying coal.

Designed to replace 70-ton cars, the larger capacity of the new units has resulted in improved delivery and unloading service while lowering maintenance costs, said Sanders.





*Plants also located in Philadelphia, Pennsylvania; Richmond, Virginia; Ravenna, Ohio; Brantford, Ontario; Granby, Quebec; Mexico City, Mexico.

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If a paper product can be engineered to do the job and effect a savings over the product or method it replaces-Sonoco can make it! Sonoco has the necessary skill, knowledge and production facilities to fulfill your requirements. Your inquiry is invited at no obligation.

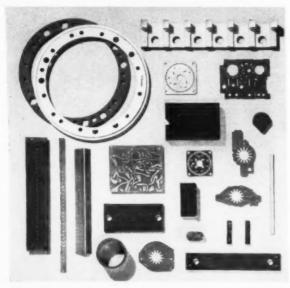


sonoco



MUTUAL ASSISTANCE: P.A.'s (I-r) Leonard Tess, Minneapolis Div.; John Dunham, Toronto Div.; and Charles L. Hammond, Los Angeles Div. exchange suggestions on a die cast cylinder made by the company.

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Idea-Swapping Sessions Pay Off

Angeles—Decentralized purchasing there's a formal idea-exchanging program between the P.A. widely separated plants, McCulloch Corp. has proven. The man-ufacturer of chain saws, outboard motors, small gasoline engines and go-karts is now reaping benefits from a mutual aid plan be-tween its three divisions that has P.A.'s trading information on sources, make-or-buy, cross-quoting, standardization, and better purchasing methods.

Once each quarter the purchasing managers of McCulloch's Los Angeles Div., Minneapolis Div., and Toronto assembly plant meet at one of the three cities to map out standardization of procure-ment aimed at cutting costs. And the plan is to include the P.A. from the company's Belgian office

at least once a year.

Although Los Angeles produces chain saws and Minneapolis (Scott Division) makes outboard motors, the present program of mutual purchasing aid evolved from a feeling that sav-ings might be realized if there was some standardization be-tween the two divisions. Likely candidates were such items as fasteners and piston pins, which both of the plants use in large quantities

Canadian Requirements

Originally, McCulloch did not anticipate that the Canadian plant would be able to contribute substantially toward any plan of con-solidated purchasing, because the Toronto facility must operate under the "Canadian content" re-quirements. According to Canadian law, a set percentage of the total dollars of manufacturing costs for the production of the saws and outboards in Toronto has to be spent in Canada. In other words, to ship parts duty free from the U.S. to Canada, a certain portion of the finished assembly has to be Canadian made. And purchasing has to hunt up appropriate Canadian suppliers suppliers.

However, at the first meeting, the group decided that if the Canadian plant in its search for vendors to meet content require-ments, happened upon items that might be "interesting enough" to the U.S. divisions, corporate wide buying of these items might be considered.

Big Plus for U. S. Units

What the Canadian purchasing department found turned out to be a big plus for Los Angeles and Minneapolis. John Dunham planning and purchasing manager of the Canadian division, did pro-vide items of interest for the other divisions.

Dunham checked out a list of several critical items, and in the second meeting of the group in January 1960, reported that a majority of the parts on the list were priced lower in Canada. And after considering transportafound that almost half of the items could be shipped to Los Angeles and still compete with present U.S. vendors.

It was as this second get to-gether dealing with merged buy-ing that the group formally de-fined its objectives. Outcome was an eight point program for maxicorporate savings box).

with added experience. For example, at the outset there was a total exchange of price quotes among the divisions. Now, after less than a year of total cross quoting, areas in which consolidated buying will benefit have been so well defined that complete exchange of quotes is no longer necessary.

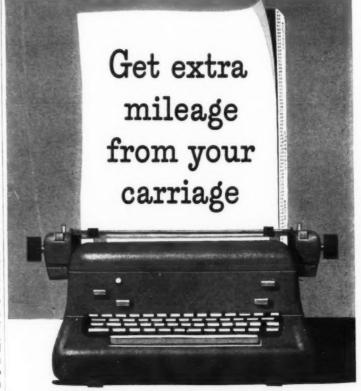
potential source visits and evaluates the vendor. If a consolidated buy is authorized and any division of McCulloch requires an expenditure for new tooling in order to participate, tooling costs are shared by all divisions on a percentage basis of the yearly savings realized.

The purchasing group also started up authorized and any division of McCulloch requires an expenditure for new tooling in order to participate, tooling costs are shared by all divisions on a percentage basis of the yearly savings realized. longer necessary.

Cross quoting is now limited to new model parts and special blocks of parts as needs develop. After an initial exchange of blueprints and complete engineering data, a division needs only to transmit the barest details to the

Although these objectives re- an evaluation of the product, the works best when main unchanged, the procedures purchaser in the area nearest the for achieving them have shifted with added experience. For exacts the vendor. If a consolidated

> started up automotive-type release orders. This is a system common in the automotive industry in which the buyer establishes a master purchase order with a vendor for a large volume buy, but no exact quantities are specified. Then, usually every month, a release goes out speci-fying the amount required and possible amount of raw materials which the vendor can stock for



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McCulloch Corp.

is an engineering change or a fluxuation in the production level, the buyer is not stuck with an unneeded inventory. More im-portant, automotive-type orders can pull down better price breaks

because of yearly quantity buys. McCulloch has two safeguards to keep suppliers from becoming too complacent under the release order system. Each division must continually seek out new vendors and review performance levels annually. Second, is the plants locally.

new cross quoting practice.

McCulloch has suggested substitutions or other cost trimming engineering changes to established or potential vendors. Midwest manufacturer recently

the following month's production. assistance program, is getting set to develop the company's European sources.

First he expects to find out

what the Belgian plant can pur-chase in Europe for its own use, rather than relying on U. S. material. Then the question will be, what can the Belgian plant purchase in Europe that could be used corporate-wide. And finally, Eischelsbach wants to study the Belgian facility to find out what semi-finished items can be shipped from the two U. S.



STARTING POINT: At quarterly get together P.A.'s look over an engineering change requested by the procurement committee to effect a cost reduction.



FINISH LINE: Also included in the mutual aid program is an inspection of finished goods packaging to find where all three divisions can cooperate to cut costs.

McCulloch's **Mutual Aid Program**

- 1. Centralizing corporate-wide requirements of common
- 2. Purchasing through the division offering the greatest over-all advantages.
- 3. Standardizing wherever possible.
- 4. Cutting corporate inven-
- 5. Increasing corporatewide use of blanket contracts.
- 6. Recommending mutual material substitutions.
- 7. Developing economic purchase lots and classifying purchasing values.
- 8. Exchanging information, tools, and ideas for mutual benefits.

adopted a number of suggestions adopted a number of suggestions made by the Scott Division that chopped about \$5,000 a year off carburetor purchases. "One of the problems we faced," Hammond comments, "was to drag each of us away from our own pet suppliers."

By switching sources, for in

By switching sources, for instance, a \$10,046 saving was possible in two items alone. Scott Division Director of Purchases Leonard Tess found that one shift turned up in the cross quoting system saved \$6,500 a year. And the Los Angeles plant saved almost \$9,000 per year by purchasing unmachined castings from a new source.

Make-or-buy is also getting me intense re-evaluation. some There has been a complete interchange of quotes on internally manufactured parts for comparison with prices available from outside sources. From this, certain parts, which had been make items, became buy items.

However, an attractive quote from outside sources does not necessarily mean that McCulloch will stop making an item. What often happens is that a compet-itive quote causes the company to search out cost cutting man-ufacturing methods so the part can continue to be made inter-

The current program to haul in \$600,000 savings in purchased parts will count heavily on the parts will could heavily on the present cross quoting system and on bringing the Belgium plant more actively into the planning. Executive Vice-President E. P. Eischelsbach, Jr., who is in charge of the purchasing mutual







How to use "value analysis" in buying electrical conduit

Evaluate Alcoa® aluminum electrical rigid conduit in terms of the problems it solves for you and the different people in your plant. For example, an electrical engineer will tell you aluminum offers many electrical advantages over steel conduit. Because it is non-magnetic and has high electrical conductivity, impedance is substantially lessened. Fault current safety devices operate quickly—sure-ly—every time

ly—every time.

Those in plant engineering know that aluminum resists corrosion, requires no protective coating in most environments, is safe in food processing plants.

Maintenance people appreciate the way

aluminum conduit keeps its good appearance, without routine painting. Also, it won't stain adjacent surfaces.

Those responsible for installation find aluminum's light weight advantageous. A ten-foot length of 4" aluminum conduit weighs only 34 pounds, compared with 98 for steel. Cutting, threading, bending—all are easy and quick. Finally, consider your interest in all costs—initial, installation, and maintenance. Compare aluminum with steel, and you'll see what a good investment Alcoa aluminum conduit really is.

Conforms to ASA C80.5-1960-Rigid Aluminum Conduit and Federal Specification WW-C-540a

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Distributors-11th Annual Convention, Arizona Biltmore Hotel, Phoenix, 15-18.

Industrial & Government Surplus Trade Exposition—Veterans Memorial Auditorium, Columbus, Ohio, Nov. 25-29.

1962

NAPA, Public Utility Buyers Group Annual Conference, February 4-6

Gravure Technical Association Convention--Hotel Commodore, New York City, Feb. 26-March 1, 1962.

1962 Indiana Industrial Show Manufacturers Building, State Fair Grounds, Indianapolis, April 4-6.

American Management Association—31st National Packaging Exposition, New York City, April 9-12.

Western Space Age Industries Exposition and Conference—Cow Palace, San Francisco, April 25-29.

PREVIOUSLY LISTED

OCTOBER

Fleet Maintenance Exposition Coliseum, New York City, Oct. 23-26.

A.S.M. Metals Show-43rd National Metal Congress and Exposi tion, Cobo Hall, Detroit, Oct. 23-27.

NAPA, District 9-Purchasing Conference, Hotel Bradford, Boston, Mass., Oct. 24-25.

National Association of State Purchasing Officials—16th Annual Meet-ing, Western Hills Lodge, Sequoyah State Park, Wagoner, Okla., Oct. 24-27

1961 Computer Applications Symposium—Armour Research Foundation of Illinois, Morrison Hotel, Chicago, Oct. 25-26.

NAPA, District 8-Purchasing Conference, Essex House, Newark N. J., Oct. 25-27.

1961 Convention of National Automatic Merchandising Assn. McCormick Place, Chicago, Oct. 28-31.

National Metal Trades Association Convention—Hotel Commodore, New York City, Oct. 29-Nov. 1, 1961.

48th National Foreign Trade Convention — Waldorf-Astoria Hotel, New York City, Oct. 30-Nov. 1.

Purchasing Agents Association of Louisville-12th Annual Buyer-Seller Dinner, Flag Room, Kentucky Hotel, Louisville, Oct. 31.

NOVEMBER

Purchasing Agents Association of Toledo-Annual Serv-a-Show, Civic Auditorium, Toledo, Nov. 1-3

Gravure Technical Association One Day Forum, Sheraton-Cleveland Hotel, Cleveland, Nov. 1, 1961.

Packaging Machinery Manufacturerers Institute—Cobo Hall, Detroit, Nov. 7-10.

Central Area Shipper-Motor Carrier Conference—Annual Meeting, Sheraton Towers, Chicago, Nov. 8-9.

7th Annual Eastern Industrial Packaging and Handling Show—Society of Packaging and Handling Engineers, Baltimore, Md., Nov. 13-14.

19th Annual Aerospace Electrical Society Display—Pan Pacific Auditorium, Los Angeles, Nov. 15-17.

National Electrical Manufacturers Association—35th Annual Meeting, Plaza Hotel, New York City, Nov. 16.



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Purity (wt per cent) min98.0
Specific Gravity (20/20°C) min0.819
Specific Gravity (20/20°C) max0.821
Acidity, as acetic acid (wt per cent) max0.001
Color (Pt-Co) max10
Water (wt per cent) max0.10
Carbonyl Number (mg KOH/g) max0.2
Distillation (°C)
Initial min
Dry Point max
Appearance: Clear and Free of Suspended Matter

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Product Perspective

S PACE SCIENTISTS—pushing hard to develop the necessary hardware to launch a U. S. astronaut—are providing industry in general with a wide variety of new equipment, materials and metalworking techniques as a byproduct of the space work. Exhibitors in New York for the recent American Rocket Society Conference and exhibit were quick to point out a long list of industrial tools that would be far distant ideas if not for space work

Areas that have particularly benefited from space work: metallurgy, electronics, chemistry, power sources, metalworking techniques, communications. Here's a rundown on some of the newest developments:

• Metallurgy: Research has produced higher strength steels and aluminums. Rarer metals like titanium, tungsten, molybdenum, beryllium have undergone extensive testing and development. Scientists have found that it is possible to increase strength of alloy steels significantly with no decrease in ductility by merely lowering the tempering temperatures of certain martensitic alloy steels

Another space project is trying to develop a titanium alloy with 200,000 minimum unilateral .2 yield strength with good toughness. Much work is centered on an 18 nickel-cobalt-molybdenum alloy steel reportedly able to deliver unixial .2% yield strengths in excess of 250,000 psi. with excellent toughness. Aluminum makers are expected to develop alloys with yield strengths approaching 100,000 psi. at 300 F to 400 F temperatures.

• Electronics. Advances in guidance and control equipment will be translated into improvements in commercial aircraft control, data processing, industrial controls, and related equipment. Space efforts have been stimulus behind miniaturization which is producing entirely new components and settling new design standards for the industry. Interest in molecular electronics and micromodule building blocks has come directly from missile work

• Chemistry. High energy fuels developed for rockets may find their way into our transportation of tomorrow.



TECHNIQUES developed in designing space age equipment—such as this oxygen unit are aiding design of industrial equipment.

cating oils and greases compounded for space uses are already being used in industry. Researchers are concentrating on solid propellants containing light metals (rather than chemical additives) in an effort to cut costs.

 Metalworking techniques. Explosive forming, electrical discharge machining, and chemical milling were all developed to meet space-age requirements. Numerical control also got its impetus from work on aircraft and missile components; in fact the great majority of tape controlled units are still working on aircraft-missile production. Companies are just starting to apply experience gained with these new techniques to nonmilitary products. Use of spark machining for die sinking is a good example.

• Instrumentation. The entire field will benefit from electronic, hydraulic and mechanical systems and devices used in the launching and guidance of space vehicles. Servos and specialty motors originally developed for space uses are already being promoted for machine tool and automation control.

• Power supplies. The area of power generation is expected to have the most far-reaching civilian implications of any space research project. Work is progressing on thermoelectric, thermionic, magnetohydrodynamic, solar, fuel cells, atomic, and ion generation methods.

The first problem in thermoelectricity has been to develop efficient materials, and most of the efforts in this area have gone towards this goal. The necessary properties represent a compromise between a number of conflicting properties and the materials which promise best results are intermediate between semiconductors and semimetals. Extensive efforts have been made to develop guide lines which help predict the most likely chemical compounds.

Thermionic power conversion is receiving attention for space power systems primarily because it gives high output power density (10 watts per sq. cm. of surface area), high temperature of heat rejection (to 1000 C), and simplicity of operation. The system is static with no moving parts

Nuclear power is getting much attention in the series of SNAP reactors SNAP-8, a nuclear turbo-electric space power system, is being developed to generate 30-kw with one power conversion system or 60-kw with two.

A variety of fuel cells are under test, with hydrogen-oxygen and hydrocarbon types in the forefront.

• Communications. People and machines all over the world will be talking to each other via satellites before too long if the telephone companies have their way. They are ready to proceed in full-scale programs as soon as political and policy considerations are settled by the government.

Projects involving both active (units that pick up the signal from earth rebroadcast it) and passive (spheres that reflect radio waves back to earth) satellites are in the works.

Here's your weekly guide to ...



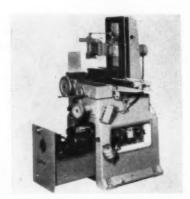
Storage Bin

Permits Stacking

Plastic box for storage of small parts is large unit measuring 13 x 8 x 6 in. It is fitted with a brace to allow safe high-stacking of fully loaded units and is available in green or yellow molded-in colors. The one-piece molding of rugged plastic resists oil,

piece molding of ruggeu plaste.
water, and most chemicals.
Price: \$2.82. Delivery: immediate.
G. B. Lewis Co., 269 Montgomery St.,
Watertown, Wis. (PW, 10/23/61)
SIC #3079





Surface Grinder

Has Double Pump

Surface grinder with low pressure hy-draulic power-pack has electric valve con-trols and double pump that permits separated hydraulic circuits for table and cross slide motions. Table speed is variable to 125 fpm. and cross feed is variable to .250 in. A lever lets the operator switch immediately from power to hand feed and back to power

Price: \$3,750. Delivery: approx. 6 wk Reid Bros. Co., Inc., Beverly, Mass. (PW, 0/23/61) SIC #3541



Rectifier Trigger

Gives High Stability Firing

Silicon controlled rectifier trigger for industrial use provides high stability firing over a -65 C to +140 C temperature range. Rated RMS, power dissipation of the unit is 250 mw. and maximum RMS, emitter current is 50 ma. The modified TO-18 package measures 0.310 in. x 0.215 in.

Price: \$3. Delivery: immediate.
International Rectifier Corp., 233 Kansas
St., El Segundo, Calif. (PW, 10/23/61) SIC #3629



Unit Heater

Has Thermostat Control

Unit heater comes in ten basic sizes ranging in heating capacity from 25,000- to 250,000-Btu. per hr. input. The compact, gasfired, propeller fan units are face-mounted and direct-connected to simplify maintenance and are for use with natural, manufactured, and liquefied petroleum gases.

Price: \$260 to \$660. Delivery: immediate.

American Radiator & Standard Sanitary Corp., Detroit 32, Mich. (PW, 10/23/61)

SIC #3433 Unit heater comes in ten basic sizes rang-



Battery Holder

Withstands Severe Conditions

Battery holder built to withstand severe operating conditions is designed for use in portable equipment. Units are made of portable equipment. Units are made of beryllium, copper, or steel and hold all popular sizes of zinc, mercury, or alkaline batteries. Contacts are silver plated, nylon insulated, and color-coded to denote battery

Price: 40ϕ to 80ϕ /each (depending on size and quantity). Delivery: 2 to 3 wk.

Augat, Inc., 33 Perry Ave., Attleboro, Mass. (PW, 10/23/61) SIC #3499

New Products

Price data that accompany each product description are list or approximated prices supplied by manufacturers. Unless otherwise noted, prices quoted are for the smallest quantity that can be ordered.

Automatic Stop Clock

Measures to 1/100 Sec.

Automatic stop clock measures time intervals down to 1/100 sec. and can be started, stopped, and reset by remote control. trol. Clutch engagement time is between 20 millisec. and 40 millisec. so that no dial compensation is needed. Two units are available: 115 v., 60 cycle and 220 v., 60 cycle.

Price: \$68.50 (115 v.) and \$71. Delivery:

Industrial Timer Corp., 1407 McCarter Hgwy., Newark, N. J. (PW, 10/23/61)



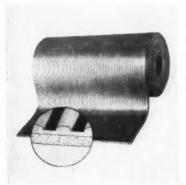
Patching Cement

Repairs Canvas

Cement patches tarpaulins and other can-vas materials on the spot without the need for dismantling or stitching. The adhesive can be brushed on and air-dries quickly, waterproofing porous surfaces and forming a flexible coating over repaired areas. Quantities range from ½-pt. can to 5-gal. kit. **Price:** \$1.48 (½ pt.) to \$7.95. **Delivery:**

immediate.

W. J. Ruscoe Co. 483 Kenmore Blvd., Akron 1, Ohio. (PW, 10/23/61) SIC# 2821



Sponge Runner

Reduces Fatigue

Rubber with wide range of uses, such as in front of office files and at machines in the plant, helps reduce worker fatigue. The top surface is of corrugated rubber and the base is sponge. It comes in black, is 36 in. wide, 1/4 in. thick, and is available in rolls up to 60 ft. long. The runner also has sound ab-

Price: \$8.63/sq. yd. Delivery: 10 days.
American Mat Corp., 2189 Adams St.,
Toledo 2, Ohio. (PW, 10/23/61) SIC #3069



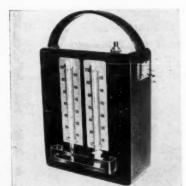
Adjustable Dolly

Supports 100 Lb.

Dolly adjusts to various diameters of cans, tubs, and bins weighing up to 100 lb. and attaches securely with just one screw setting. A smaller model that fits recessed bottoms extends to a 16-in. dia., and the larger size fits rimmed bottoms and adjusts to 23 in.

Price: \$4.45 and \$4.95. Delivery: im-

mediate.
Pemko Mfg. Co., 5755 Landregan St.,
Emeryville Calif. (PW, 10/23/61)
SIC #3537



Relative Humidity Unit

Gives Rapid Readings

Instrument designed for quick determination of relative humidity in general commercial and industrial applications gives accurate readings in any position. Two flashlight batteries power a fan of low current drain to provide proper air circulation and evaporation. The chart for readings is attached to the base attached to the base

Price: \$63.50. Delivery: immediate.
Better Fabrics Testing Bureau, Inc., 101
. 31st St., New York 1, N. Y. (PW, 10/23/61)

Current Research and Development

LUMINUM FOAM that actually floats is under development at Dynamic Metals, Inc. Foamed aluminum weighs only one-twelfth as much as solid aluminum. Building and decorative fields have the edge in applications that include acoustical tile and room dividers. Chemicals produce the foaming when mixed with molten metal, and density can be adjusted by controlling the amount of gas bubbles trapped. The final product can be sawed, machined, nailed, or glued.

TRUCK TIRES that promise twice the tread wear of conventional tires use a new approach in ply patterns. They have steel cord reinforcements. The tire, now under development at Firestone Tire & Rubber Co., runs the cord in each ply radially from bead to bead rather than following present tire constructions that change the direction or angle of the fabric cord in each succeeding ply. The change cuts total weight by 6% to 8%, and the radial ply construction also gives 72% better impact resistance, less power loss, a softer ride, and 65% cooler running than conventional units.

POLYMER ADHESIVES with increased resistance to high temperaturesup to 975 F-may soon be pushed even higher. Development work at Narmco Industries' research and development division has also substantially improved high-temperature tensile shear by introducing inorganic curing agents that give the high heat-resistance. Systems under development are epoxy novolak, a silicone-phenolic condensation polymer, and aluminum with arsenic pentoxide as the curing agent. Other possible compounds are vanadium pentoxide, barium oxide, and magnesium oxide.

NITRILE RUBBER's resistance to severe environmental conditions—and particularly to sunlight and ozone—is in for a boost if exploratory work at Polymer Corp., Ltd., of Canada bears fruit. Scientists there are mixing it with polyvinyl chloride in amounts ranging from 20 to 100 parts of rubber by weight, producing materials that function essentially as rubber. Prototype blends have delivered materials tailor-made to combat specific environmental conditions.

NONWOVEN FABRICS now under development appear to have overcome a major drawback of some of the more conventional types by yielding unique tensile and tear properties. The materials are produced by a process integrated with the manufacture of the fibers themselves. DuPont research people foresee initial applications in apparel and as base materials for coatings and impregnation.

LIGHT BULBS 25% brighter and up to 100% longer-lasting than conventional high-brightness tungsten bulbs will soon be available for use where high intensity, directed light is needed. The replacement of tungsten used in ordinary filament bulbs with tantalum carbide permits the higher operating temperatures needed to increase the brilliancy. Polaroid Corp. expects automobile headlights, flashlight lamps, and stadium lamps to be the first applications.

CAPACITOR-DISCHARGE TECHNIQUES that provide a tremendous energy release in millionths of a second may yield new materials as well as metalworking methods. Reactions of the shock wave effects are entirely different from those of conventional rates of energy releases and produce reactions heretofore impossible on a controllable basis. Researchers at Electro-Hydraulics, Inc., have shaped, embossed, blanked, and plated most metals with no molecular deterioration from stress or heat, and have hardened and deep-drawn or extruded some without cracking.

SAFETY DEVICES under test for automobile passenger protection stand a good chance of joining seat belts as standard safety equipment, according to researchers of Liberty Mutual Insurance Co. Actual products being sampled include zippered vests to protect the body, headrests to protect against whiplash injuries in collisions, swivel bucket seats, and crescent-shaped steering wheels attached to collapsible steering gears.

STAINLESS STEEL research programs on high-strength grades appear to be taking two principal paths: the producing companies are concentrating generally on developing new alloys of improved strength properties; while, government contracts according to the Batelle Memorial Institute, are exploring the existing alloys to accumulate information on properties and physical metallurgy so that they may be used more effectively.

Your Guide to New Products

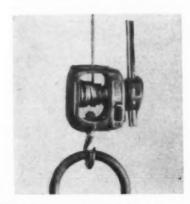


Power Megaphone

Carries Voice 500 Ft.

Transistorized power megaphone works off four D cell batteries to carry voices 500 ft. The speaker case, which comes with a carrying strap, is of impact-resistant plastic, and up to 50 ft. of extension cord can be used with the microphone. Unit size is 8½ in. x 5½ in. x 2¾ in.; total weight is 2½

Price: \$12.95. Delivery: immediate. Edmund Scientific Co., Barrington 66, N. J. (PW, 10/23/61) SIC #3679



Portable Winch

Lifts 2,000 Lb.

Portable winch with a lifting capacity of more than a ton fits a wide range of applications. The unit is equipped with 15 ft. of γ_8^3 -in. cable and a long-wearing molybdenum-filled nylon bearing, and has a steel handle that can be positioned in any of eight handle-position holes. The free-swivel hook handle-position holes of foresed steel and the compact housing is of forged steel and the compact housing is an aluminum alloy.

Price: \$29.95. Delivery: immediate. Gray Properties, Inc., 421 S.W. 6th Ave., Portland 4, Ore. (PW, 10/23/61)

SIC #3536



D.C. Amplifier

Fits Many Needs

Transistorized, wideband d.c. amplifier for use by original equipment manufacturers gives equipment manufacturers gives a sensitivity increase from 10 to 1,000 with 50 megohms input impedance. The unit is for use in digital voltmeters, direct writing recorders multiple and the second of ing recorders, multiplexers, and many other recording and meas-uring instruments. It may be used also as an integrator, sum-

ming amplifier, active filter, and for other operative functions.

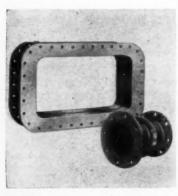
Price: \$390. Delivery: 1 wk.
PM Electronics, Inc., 5221
University Ave., San Diego 5,
Calif. (PW, 10/23/61)

SIC #3611





5 Basic Strapping Questions...



Rubber Expansion Joint Comes in Many Types

Expansion joints of abrasionresistant rubber have duck reinresistant rubber have duck reinforcement and neoprene coating. Standard spool types come for pipe sizes from 2 in. to 72 in.; vacuum types, for 30 in. of mercury; and pressure types, for 0 to 150 psi. depending on size. Integral flanges make installation easy and assure tight seals without gaskets. Special expanwithout gaskets. Special expansion joints are available on

Price: approx. \$77 to \$1,700.

Delivery: 3 wk.

Crane Packing Co., Dept.

PW-7, 6400 W. Oakton St.,

Morton Grove, Ill. (PW, 10/23/61) SIC #3069



- 1. Where do you put the straps and how many should you use?
- 2. What kind and size of strapping is best for the application?
- 3. Should you use hand tools, power tools, or automatic strapping machines?
- 4 · Would a simple jig or fixture help?
- 5. How should the work, the material flow, the tools, and the equipment be arranged?



Work Platform

Has 1,500-lb Capacity

Heavy-duty line of hydraulically adjustable work platforms ranges up to 12 ft. on standard units. Single or double scissor models are available as electro- or air-hydraulic units with electric models in a variety of voltages and air drives desired for riety of voltages and air drives designed for normal shop air pressures.

Price: approx. \$1,800 to \$3,500. Delivery: 4 to 6 wk.

Ballymore Co., Lincoln & Garfield Aves., West Chester, Pa. (PW, 10/23/61) SIC #3999



Fork Lift Spray

Lubricates Chains and Cables

Chain and cable lubricant for fork lift trucks contains graphite particles suspended in a solvent. Controlled viscosity prevents dripping on slow speed or idle chains while allowing free flowing into chain links during high-speed operation. It is a "dry" type that won't attract dirt that won't attract dirt.

Price: \$20.95/case (12 cans). Delivery:

immediate.
Clark Equipment Co., 7300 S. Cicero
Ave., Chicago 29, Ill. (PW, 10/23/61)
SIC #3999





Wrong answers are costly... right ones are free

If you have the right answers to these five questions, chances are that steel strapping is saving you money, making your products cost less to handle, ship, store, and receive.

But will those answers stay right? Your business does not stand still, any more than ours does. New products, new packages, new methods, new customer demands come along. Yesterday's right answers may be today's wrong ones.

You need right answers on a continuing basis—and you get them free from Signode, with the help of—

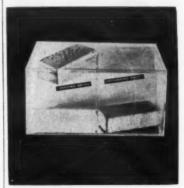
- · trained packaging and shipping specialists.
- the widest selection of hand and power strapping tools and automatic strapping machines.
- the most complete testing and engineering facilities.
- 48 years of experience in solving packaging, handling and shipping problems.

Why settle for less? For right answers, call the Signode man near you, or let us put him in touch with you.



EEL STRAPPING

2670 N. Western Avenue, Chicago 47, Illinola Offices Coast to Coast, Foreign Subsidiaries and Distributors World-Wide In Canada: Canadian Steel Strapping Co., Ltd., Montreal • Toronto



Water Repellant

Prepares Masonry

Protective water repellant provides a perfect water repellant provides a perfect water barrier without impairing the "breath-ing" characteristics of above-ground masonry. It is a clear, silicone treatment that doesn't stain surfaces and resists alka-line attack. The coating stops penetration of wind-driven rains and ends the cracking and spal-ling caused by moisture retained

within masonry pores.

Price: \$1.95/gal. (in drums).

Delivery: immediate.

Harco Chemical Co., 338

North Avenue, E., Cranford,

N. J. (PW, 10/23/61) SIC #2821



Wall Washer

Has Two Tanks

Wall washing unit with two opper tanks holds enough tanks copper cleansing material for a full day work. Two valve-controlled trowels are designed for easy op-eration in washing walls and are quickly attached for use. A third trowel can be used for fast dry-Trowels are attached to hose lengths that permit opera-tion as much as 20 ft. from the central unit. Besides walls, it can be used also for cleaning up-

holstery, stair runners, etc.

Price: \$290. Delivery: imme-

Thompson & Sons, Inc., 8130 W. 47th St., Lyons, Ill. (PW, 10/23/61) SIC #3589

Product News in Brief

or a 10c TOY

WIRE FORMS | STAMPINGS

Whether you require the close tolerance needed in a satellite—or the economical production necessary for a 10c toy... DUDEK & BOCK is your most dependable source for springs, wire forms and stampings. Years of know-how quality control guarantee you top performance at lower cost.

Phone DICKENS 2-1020 for estimates and delivery dates

K & BOCK

SPRING MANUFACTURING CO.

New Epoxy Diluent

New York-Antara Chemicals Div. of General Aniline &

for a

million

MISSILE

SPRINGS

BROCHURE

dollar

AT-534, is reported to con- resins at room temperatures, and tribute unusual formulating and end-property advantages such as improved impact resistance. It end-property advantages such as improved impact resistance. It Film Corp. has made available an epoxy diluent at 45¢/lb.

The nontoxic material, Agent are capable of curing epoxy

curing agent admixtures without any appreciable effect on the rate of cure or gel, even at room tem-peratures, and has shown a high margin of safety in toxicity tests.

New Plastic Fishtape

- Cadillac Plastic & Detroit -Chemical Co. has developed a



plastic fishtape said to combine absolute nonconductivity with the strength and stiffness of conventional steel tapes.

The new fishtapes (pictured

above) are produced in continuous lengths of 200 ft. and longer with ½-in. dia. Smaller sizes may be added later. Special hardware has been developed by Cadillac to speed passage and return of wires and to join sections for extremely Conditioning & Heating Corp. and 85 to 15% and 68.

long runs. "Cadco" fishtapes are has developed a combination air virtually friction free and impervious to corrosion or abrasion, according to the company.

Italian Furnaces

South Bend, Ind .- Hevi-Duty Tagliaferri furnaces, used for improving the quality of cast iron and other metals, are now being made and sold in the U.S. by Hevi-Duty Electric Co., Water-town, Wis., a division of Basic Products Corp., Milwaukee, under a licensing agreement with Forni Elettrici A. Tagliaferri of

Milan, Italy.

The first Hevi-Duty Tafliaferri furnaces sold in the U. S. are being used by Sibley Machine & Foundry Corp. here to produce castings for auto and aviation parts. Some 1,000 such furnaces are in use in Europe and Asia are in use in Europe and Asia.

Frozen Food Container

Nashville—Avco Corp. is mar-keting a frozen foods container that can be transported without the expense of mechanical refrigeration or dry ice.

Food loaded in the container, called Avcold, at —5F will remain below 0F for 24 hr. or more in a summer environment of 100F or higher. The 40 in. x 40 in. x 60 in. container is composed of an inner chamber of aluminum and an outer chamber of steel. Between them is 21/2 in. of polyurethane plastic that was foamed in place.

Any of five different doors are

available for individual needs.

Cooling-Heating Unit

conditioning and heating unit for roof - mounting on buildings.

Units are oil- or gas-fired and weigh from 1,200 lb. to 5,000 lb. For heating, they range from 150,000 to 600,000 Btu.; for air conditioning, from 5 tons to 35 tons. Corresponding prices range from \$1,500 to \$8,000.

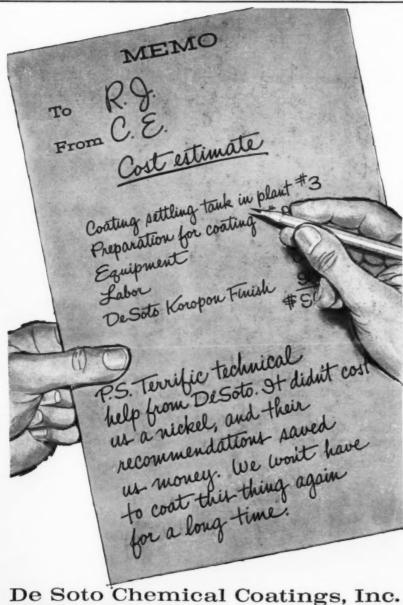
The housings are aluminized steel to combat rust and the systems are designed for easy servicing. Other features include mechanical draft, electric ignition, jet-type flame for heating, balanced dampers, and a potentiometer damper motor.

Cobalt in Coiled Strip

Toronto — Sherritt Gordon Mines, Ltd., has developed a powder rolling process that it says for the first time permits the production of pure (99.9%) cobalt in coiled strip form. Base price is \$4.40/lb.

The production technique, according to the company, leaves the strip with the ductility and workability essential to metalworking operations and extends cobalt's applications to a much wider range of products. Initial offerings are in thicknesses from .005 in. to .025 in, and widths of ½ in. to 6 in.

Mechanical properties, the company says, can be adjusted by proper heat treatment. For inproper heat treatment. For instance, strip cold rolled to a 25% reduction has a 165,000-psi. tensile strength, while strength after annealing is 115,000 psi. Under the same conditions, elongation and Rock-wall heardness (45T) or from 5%





JNBREAKABLE!

This is a punishing test for a hack saw blade. We do it to prove that a Marvel High-Speed-Edge Hack Saw Blade is <u>unbreakable</u>. A Marvel Blade can be bent like this thousands of times and it. <u>still won't break</u>.

Why? Because the blade body—to which a high speed steel cutting edge is welded—is made of a tough, non-brittle alloy steel designed to take the heaviest feed pressures and highest speeds any modern hack sawing machine can develop.

Operators, knowing they can trust Marvel Blades not to break, tension them truly taut

(from 200% to 300% more than ordinary blades) to produce maximum obtainable accuracy of saw cut.

accuracy of saw cut.

2. They can safely apply heavier feed pressures and higher speeds without endangering themselves or the machine to produce faster cutting-off.

3. Longer cutting life is assured because the blade simply won't break.

Ask for Marvel High-Speed-Edge Hack Saw Blades by name and you can be sure you're getting the unbreakable blades designed to give you maximum accuracy, speed, and safety in your cutting-off operations. Leading Industrial Distributors have Marvel Blades in stock.



ARMSTRONG-BLUM MANUFACTURING CO. 5700 Bloomingdale Avenue . Chicago 39, Illinois

1350 SOUTH KOSTNER AVENUE CHICAGO 23. ILLIN



Strapping Dispenser

Feeds Tensioning Tools

Dispensing reel feeds flat strapping up to 3/4 in. x .028 in. and most sizes of oval strapping. To load, the unit is placed on strapping. To load, the unit is placed on end and the strapping, which can be fed from either direction, is rolled into place. A slight pull on the strap sets the reel revolving, and a flexible spring gives a smooth flow and eliminates damage to strap edge.

Price: \$795. Delivery: approx. 2 wk. A. J. Gerrard & Co., 400 E. Touhy Ave., Des Plaines, Ill. (PW, 10/23/61)



Rectifier Welder

Has Single Range Control

Silicon d.c. rectifier welder for arc welding, cutting, or gouging has single dial that controls the entire welding range of the machine. Optional remote control for hand or foot operation can be connected to the machine and made operational by flipping the remote control switch on the control

Price: \$540 and \$600. Delivery: imme-

Hobart Bros. Co., Troy, Ohio. (PW, 10/23/61) SIC #3623



Bending Brake

Works Flat Stock

Ram-type bending brake with a capacity of ½- x 2¾-in. coldrolled steel forms flat stock into a multitude of part shapes. It accurately produces zero radius bends and increases or decreases degree of bend by easy hand crank adjustment of the tool holder. The machine operates at speeds to 50 cycles per min. and is powered by a self-contained, 7½-hp., 2,000-psi. hydraulic sys-

Price: approx. \$5,000. Delivery: 10 to 12 wk.

Pines Engineering Co., Inc., 601 Walnut St., Aurora, Ill. (PW, 10/23/61) SIC #3542



Cleaning Compound

Renovates Water Softeners

Compound for cleaning and renovating of water softeners leaves resin beds completely free of surface coatings and restores them to full storage capacity. It is intended not as a replacement for salt water flushings but for use when coatings on resin par-ticles make salt water ineffective. The compound, which does not foam, may be mixed in the brine measuring tank and siphoned into

the softener with the brine.

Price: \$1.50/lb. Delivery: im-

A & B Research & Mfg. Co., Inc., 4500 Montrose Blvd., Houston 6, Tex. (PW, 10/23/61) SIC #2818

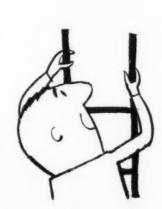
A. O. Smith electrodes are strictly top shelf

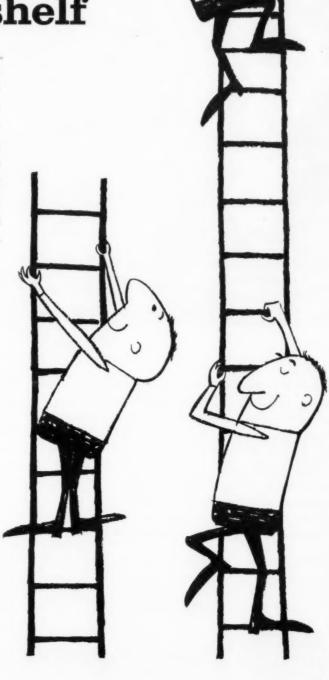
When you reach for an A. O. Smith electrode, you've reached a high point in quality. We're not stretching that point when we say that our electrodes are backed by the industry's strictest quality control program. We test 'em by eye! We test 'em mechanically! We test 'em electronically! We weld test 'em after baking. We do everything humanly possible to assure top performance welds.

We think we know a good thing when we weld with it. You will too when you reach for an electrode made by A. O. Smith.



ELDING PRODUCTS DIVISION A. O. Smith INTERNATIONAL S. A.







Answers to Strategy Games on Pages 12 and 13

Answer to Problem I

Your payoff box should look like this:

	Aug-pause	NOT LED
INSISTS ON CUT	+ 500	0
PEACHUM DOMN'T INSIGT	-#400	- \$500

After you play this game the old way to get the one unique answer (starred below), you'll see that Peachum should ask for a discount, but Cut-Rate should hold off announcing the price cut to Peachum.

	FO	st s	
	TO CLAT	AUTHOR: 3ED	3
ENSIRETS ON CLAT	+*500	0	0#
PERCHUM DOSIN'T ENDST	- *400	- \$500	-\$500
	+ \$500	0*	1

Answer to Problem II

Your original matrix in the Christmas Gift Crisis will look like this:

	SHERM POLITRIU DEN	GIVES Dask
E Cienas		
BILL GIVES		
CIGARS		

After figuring the strategy payoff and inserting the numbers you'll get this:

	SHERM GIVES		
,	FOUNTAIN PEN	Desk	
5¢ CIGARS	-1	+3	
BILL GIVES EXPENSIVE COMMES	+1	-5	

Now subtract and reverse the numbers on the sides of the box:

	SHERM GIVES		
,	PEN	DESK	
5¢ CIARRS	-1	+ 3	6
EVENSIVE	+1	-5	4
L	8	2	

The strategy that Bill should follow is buy 5e cigars 60% of the time, expensive cigars, 40% of the time. Sherm should buy fountain pens 80% of the time.

Faultless ADELTING AUGUSTESS

Faultless manufactures over 10,000 caster types, sizes, and varieties . . . casters for every conceivable purpose . . . The Casters to move your products easily, in quantity, economically! Faultless Casters are engineered and tested to roll smoothly and efficiently under any load from 15 lbs. to 15,000 lbs. per caster. And Faultless manufactures a complete selection of swivel, rigid, plate, and stem casters, plus a wide variety of special application casters. This complete selection from one manufacturer—Faultless Caster Corporation—includes The Casters to reduce materials handling costs and increase efficiency at your plant.

Your Faultless Industrial Distributor, or your nearby Faultless Sales Engineer can supply you with detailed information on the complete Faultless Caster line. Also, your Faultless Distributor maintains a substantial stock of Casters for immediate shipment.



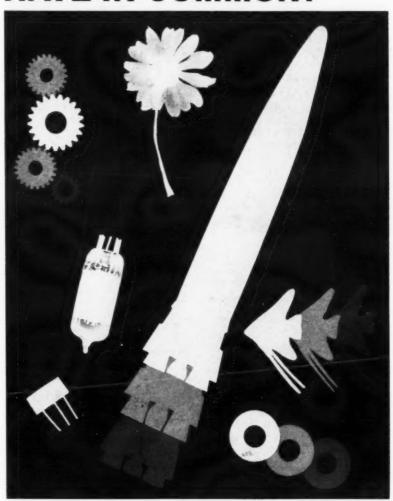


Faultless Caster Corporation

EVANSVILLE 7, INDIANA

Branch Offices in principal cities of the U.S.; see the Yellow Pages of the telephone book under "Casters." Canada: Stratford, Ontario

WHAT DO THESE ITEMS HAVE IN COMMON?



All are rushed to destinations by Delta Air Freight; get nationwide overnight right-to-the-door delivery. Thousands of commodities speed daily with Delta dependability. For your next shipment, check how little by Delta Air Freight — always faster, often cheaper.





General Offices: Atlanta, Georgia



RUST PREVENTIVE is sprayed on underside of Michigan Bell car. Holes are drilled in body sections to reach interior panels with compound.

New Rust Preventive Cuts Fleet Upkeep Costs

Detroit—Michigan Bell Telephone Co. officials estimate that a unique new rust prevention treatment will cut in the neigh
painted on the underside of the highly-touted rust preventives.

After two years' experience with some vehicles in the fleet, but the services of an experienced borhood of \$40,000 a year from

face, since rust moves from inside material is also

borhood of \$40,000 a year from motor equipment superintendent costs of maintaining their 4,600 Gilbert H. Selke claims that rust car and truck fleet.

A material called Compound L, produced by the Texas Co., is sprayed under pressure through holes drilled into the body at about 18 points in the average are produced by a company policy required.

Typical hole locations include gravated by a company policy of keeping cars and trucks five A thicker solution of the to seven years. Bell is not yet sprayed or willing to put its maintenance

repairman who knows the hidden inner construction of the body

required.

Typical hole locations include two in each door structure. One is used to spray the compound into every nook and cranny inside the door structure. The second hole functions to release air pockets that might obstruct the spray, and secondly, to re-peat the spray process in the reverse direction. Results are then inspected by a crooked-neck



PLASTIC PLUG is fitted into hole drilled to receive rust preventive.

flashlight to make sure all areas are covered.

Holes, located in unobtrusive spots, are sealed with commonly

available plastic plugs.

Compound L is said to be the 'creepiest" petroleum-base grease known to man and will cover up human error. Unlike certain asphalt-based undercoating, Compound L does not chip. It is impervious to the common impervious to the common chemicals applied to roads that attack cars, such as rock salt, calcium chloride and even the organic acids found naturally in

the soils of some dirt roads.

The Texas Co. says that at least seven different rust inhibitors are compounded with the basic grease. Most other major oil companies are understood to have a similar product either on the market or almost immediately available should demand arise.

Michigan Bell's Selke estimates that it costs about \$25 to treat a new vehicle. The steam cleaning required for cars that have been used adds up to \$15 more. The company used three local contractors for its crash program to treat 4,600 vehicles, choosing body repair shops primarily for the knowledge of the inner structure of vehicles

Selke estimates that under \$3,000 is required for the equipment investment, \$1,000 of which goes for the steam cleaning apparatus. Commonly available grease guns are modified with longer nozzles, and the typical service station air compressor furnishes the pressures required. Once location for the holes is established, it takes no longer than a day to train personnel. Selke says Michigan Bell will give fleet operators interested in

the procedure complete coopera-tion. He also guessed that the local contractors themselves would soon be set up to offer the service on a nationwide basis.



PROBLEM: How to wrap a package so it will take rough handling.

SOLUTION: International Paper's Gator-Hide, Extensible Kraft has a built-in stretch that withstands sudden shocks.

THESE PACKAGES are wrapped with International Paper's rugged Gator-Hide Extensible Kraft. You can drop them, throw them, bounce them. This wrap can take it!

Gator-Hide Extensible Kraft actually stretches to absorb sudden shocks without ripping. This makes it the ideal wrap for any product that must withstand rough handling. Magazine publishers, for example, have found that Gator-Hide Extensible Kraft sharply reduces their post office rejection rate.

International Paper pioneered the introduction of white, black and golden brown extensible kraft. Now, there are many special colors available. And Gator-Hide Extensible Kraft is supplied in either sheet or roll form, with such features as electric eye cut-off markings.

Gator-Hide Extensible is also a remarkably uniform kraft paper. This makes it ideal for superior flexographic printing. Platemakers, inkmen and pressmen in our Southern Kraft Division have been extensively trained in this process. Using modern 3-color flexographic presses, they'll brilliantly print your sales message. Give you wrappers that promote as they protect.

In paper and paperboard, International Paper's sales and technical staff provides you with packaging that's designed from the beginning to suit your product and solve your problems.

Call any of our seventeen Southern Kraft offices. Or contact your paper merchant-he's probably been doing business with us for years.



Manufacturers of papers for magazines, books, newspapers • papers for home and office use • converting papers • papers and paperboards for packaging • labels • folding ners · shipping containers · multiwall bags · grocery and specialty bags and sacks · pulps for industry · lumber, plywood and other building materials

Product Briefs

Teflon comes in tape and film form for wide range of applications requiring insulation and protection against thermal, methodical about the state of chanical, chemical, and electrical extremes. Sizes available are from ½ in. to 18 in. wide and from .002 in. to .125 in. thick. Tri-Point of New England, Inc., 81 Venturi Ave., Box 287, Warwick R I wick, R.I.

fiber drums to protective pack- and standoff insulators. Glastic

Bag Co., 408 Pine St., St. Louis 2. Mo.

Molding compounds for electrical parts include a high dielec-tric grade with high impact strength and a flame retardant Polyethylene liners on perforated roll come in handy dispenser box for uses ranging from lining latter for circuit breaker housings

4321 Glenridge

Acrylate monomer for emulsion polymer formulations is offered for cleanser-resistant, acidsensitive floor polishes. Floor polishes with the material indicate increased adhesion to almost any common substrate. Union Carbide Chemicals Co., 270 Park Ave., New York 17, N.Y.

tion above the floor or flush with the floor for handling of bulky, hot, or heavy materials and assemblies. Conveyors can be supplied to any practical width from 12 in. to 60 in. May-Fran Mfg. 1710 Clarkstone Rd., Cleveland 12. Ohio.

Polyethylene bag for packaging of small products comes with header already attached to eliminate stapling and double handling of bag and header after loading. It comes in widths from 21/4 in. and up, in any length up to 12 in. Loading can be by hand or existing machinery. *Plastic* Conveyor belting of flat-top hinged-steel design and flat-top steel conveyors permit installa-

Broom filament of polypropylene lasts up to 20 times longer than natural materials and has a higher tensile strength than other plastics used in mechanical street sweepers. Bend recovery and abrasive qualities let it handle many jobs. Keystone Plastics. Inc., 280 Badger Ave., Newark, N.J.

Low temperature cabinet for testing and processing of all types of electro-mechanical components comes in 5- and 13-cu. ft. capacities with five temperature ranges to -120 F. They are suitable for metal aging, annealing, shrinking, hardening, etc. Deltair Products, Villa Park, Ill.

Casting compound can be cast to almost any thickness or size and is suitable for solid casting and hollow slush molding. The shrink-proof liquid compound can be cast in rubber, plaster, or wood molds and yields strong castings that are waterproof and resistant to heat, solvents, and weather. Allen Plastics Corp., 1015 E. 173rd St., New York 60, N.Y

Hose fittings and assemblies fit hose I.D.s of ½ in. to ¾ in. for applications conveying air, water, oil, and petroleum base fluids at pressures to 250 psi. They push-on with barbed stems that lock the fitting in the hose. No external clamps or ferrules are needed. The Lenz Co., Dayton 1, Ohio.

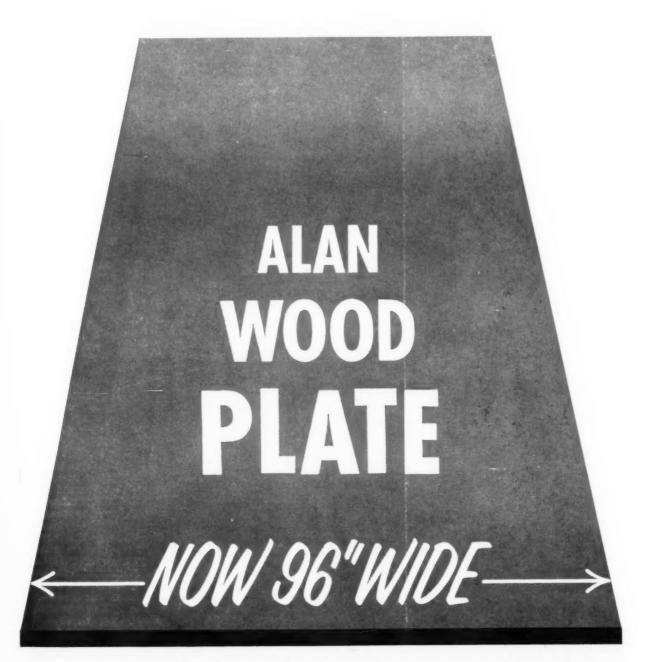
Soak cleaner for general purpose use removes oil, grease, and buffing compound from all metals. The free-flowing, dry powder performs equally well in hard or soft water and can be used with air or mechanical agitation or in ultrasonic cleaning. MacDermid, Inc., Waterbury 20,

Insulating varnish for electronic components comes in two grades for protection at temperatures to 150 C and 180 C. After curing, the transparent coatings give unusual resistance to moisture, chemicals, corrosive gases, fungus, weathering, and aging, Ram Chemicals, 210 E. Alondra Blvd., Gardena, Calif.

Solder that provides up to 331/3 % greater flow consists of a solder wire center coated with flux and then covered with an outer sleeve of solder. It comes in all alloys of tin-lead in diameters from .032 in. up and in varying flux percentages. Alpha Metals, Inc., 56 Water St., Jer-sey City 4, N.J.

Nylon pressure tubing for almost any hydraulic-pneumatic service withstands temperatures from -40 F and +185 F and is flexible enough to eliminate the need for pre-bending or flexible couplings. It comes in 1/8-in. to 1/2-in. sizes and in 1,000- and 2,500-psi. grades. Weight is ½ that of copper. Garlock, Inc., Palmyra, N.Y.

Fixer-lacquer for processing of aluminum offset plates imaged by photocopying provides sharp images and fine detail. It is applied in a single step by sponge or wiper to the exposed and de-veloped plate, automatically fixquired lacquer coating. Agfa, Inc., 516 W. 34th St., New York 1, N.Y. ing the image and providing re-



Now-from our new wide plate mill-quality sheared plate up to 96 inches wide...or up to 4 inches thick ... in lengths up to 80 feet.

A unique third stand adds improved finish and flatness to regular plate. It is also used to impress the familiar and exclusive Super Diamond pattern on floor plate, now available up to 2 inches thick.

We've added a new blooming mill, too . . . for handling bigger ingots, turning them into the heftier slabs needed to feed our plate mill's extra capacity.

These new mills are part of Alan Wood's \$36-million expansion program . . . creating new and better ways to serve you. Let us supply your steel needs.



ALAN WOOD STEEL COMPANY

Conshohocken, Pa. . STEEL PRODUCERS WITH THE CUSTOMER IN MIND

Plates (Carbon, Alloy, Hi-Strength) • Cold Rolled Sheet and Strip • Hot Rolled Sheet and Strip (Carbon, Alloy, Hi-Strength) • "A. W." Super Diamond Patterned Floor Plate • "A. W." Algrip Abrasive Rolled Steel Floor Plate • "A. W." Iron Powder • "A. W." Pig Iron • Foundry and Industrial Coke • Coal Chemicals Mine Products • "Penco" Lockers, Cabinets and Shelving.



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Magnesium Industry Scores 'Misleading' Specs

lurgy team was able to cut a 50% rejection rate on castings to less

Members of the Magnesium Assn., at their 17th annual meeting also spoke up for strengthening magnesium's position in existing product lines before searching out new markets. "There is a great need for more vigorous selling activity in all areas where magnesium is in use today," Jerry Singleton, executive secretary of the association said.

"Electronics and materials handling are two prime areas where we no ahead," he said.

lems encountered by both pliers and customers.

Mfg. Co., told the group: "You deliver a tin-plated part only to be told that it doesn't meet specbe told that it doesn't meet spec-ification, you are told for the first tric Co. and Bell Laboratories time that the customer has his own set of specifications.

When a part's finish is inspected, he noted, very often the inspector himself isn't sure what is right and what isn't, and so he has to call in the engineer to see if the product measures up to its intended use. "So even a customer's own specifications can be inaccurate or vague.

"Specifications should be set up we now are moving he said. according to the degree of accuracy needed," Honold said. curacy Discussions on the question of "A product specification should specifications detailed the prob- be like an address—with name, oth sup-Ludwig but once it starts to tell you what

delayed the awarding of the John

Day turbine contract. Since the

turbines aren't due for installa-

tion for several years, the delay

won't be significant.

Honold, president of Honold roads to take to arrive at the par-Mfg. Co., told the group: "You ticular house, it begins to confuse.

> told how they used a team effort of engineering, purchasing, and a metallurgist to cut down on re-The group visits a supplier to determine his capabilities and the quality of his work, and to provide for an early exchange of information. Specific under-standings as to the exact requireof ments needed are developed.

All drawings of castings of all types and gradations also are reviewed in light of their ultimate use. Important properties are indicated exactly with the understanding on the part of the supplier that they are minimum requirements and any deviations must first be negotiated.

When the program started about 2,000 castings a month were being received at Western Electric's Greensboro, N.C. plant, and the rejection rate ran as high as 50% at times. After 10 months, 8,000 castings per month were coming in, and the average reduction rate was cut to less than 1%. A year later, of 11,249 castings received in one month. only 54 were rejected.

'Buy American' Violations Charged In Hydro Turbine Contract Award

Washington - A major test In the meantime, the Corps has may be looming for an executive order setting qualifications for domestic bidders on federal con-tracts under the "Buy American"

In letters to the Corps of Engineers and General Accounting Office, Allis-Chalmers Mfg. Co. challenged the legality of the executive order issued by President Eisenhower in December, 1954, as not complying with the intent of Congress in the "Buy American" act.

Specifically, Allis-Chalmers attacked a competing bid of Baldwin-Lima-Hamilton Corp. to supply 15 big hydro turbines for the Corps' John Day Dam on the Columbia River between Washington and Oregon. The B-L-H bid was low—\$17,826,000—al-though B-L-H said 42.7% of its work would be performed in Japan. Allis-Chalmers' bid for the turbines was \$20,786,250, but all of its work would be performed in the U.S., and also within a surplus labor area.

A-C Objections

Allis-Chalmers protested the B-L-H bid on grounds that it was: (1) incorrectly calculated, should have showed about 70% of the work being done in Japan. (2) not in keeping with the pro-visions of the "Buy American" act, regardless of whether it complies with the executive order. (3) a threat to national security because it would damage the domestic industry. This single domestic industry. This single contract, said Allis-Chalmers, would account for more, dollar-wise, than the U.S. industry's

average yearly business.

Allis-Chalmers claimed the
Eisenhower order was in conflict with the act because the order permitted up to 49% of a government contract to be performed overseas while still qualifying as a domestic job. On the other hand, said the company, the act requires "substantially all" of contract work to be done in the U.S. to qualify as a domestic bid, and "a product cannot possibly be considered 'substantially all' of American articles materials or supplies, if only slightly less than 50% are of foreign origin."

Comptroller General Joseph Campbell is expected to rule on the issue by the end of the year.

Distributors Refuse to Join Jessop In Move to Erase Stainless Discount

Chicago—Stainless steel distributors gave Jessop Steel's Warehousing Div. a lot of moral support last week on its decision agreed that the 7½% discount, to eliminate a prevailing 7½ % sheet discount. But as of midweek, stainless service centers were indicating they were not inclined to play follow the leader with anyone other than U. S. Steel or Ryerson.

Service center operators in key cities said they were waiting for stainless demand to firm. "And unless it does," said one, "neither will prices

In St. Louis, one major stainless service center spokesman said: "When U. S. Steel or Ryerson talk, then it will be time for us to change."

been growing smaller.

Jorgensen Steel Co., San Franus to change.

Company Will Stick

Jessop had announced elimination of the general 7½% discount on stainless sheet in effect only 5% or 6%. since last August because it was and unprofitable. "unrealistic" Despite the fact Jessop was in effect posting the highest prices in to give discounts of 5% and 6% week it would stick to its decision

which leaves them a 2½% margin, is pretty "unrealistic." One estimated that direct selling costs usually run 4% to 5%-a fact which makes stainless sheet a loss item under current pricing.

Summing it up, one Los An-les dealer said: "There is dealer said: strong motivation to return to a normal margin of profit, but there is a stronger motive to remain competitive.

A P/W survey, however, revealed that in a number of areas discounts on stainless sheet have

while admitting that it "will have to continue discounting as long as the practice exists," added, "out here the figure runs

A spokesman for Brown & Wales Steel Co., Boston, said the firm has never given 7½ % dislong as its competitors do. toured North Carolina's Trade

Purchasing Week's

Purchasing Perspective

(Continued from page 1)

make a full contribution to their own corporate earnings and managerial development, purchasing men must concentrate more on vendor know-how and developmental capabilities.

Here develops one more argument for concentration on good vendor selection methods and good vendor relations. When the profit squeeze is on, the purchasing man then can become an even stronger factor in cutting his own manufacturing and R&D costs without sacrificing product quality.

The Pentagon decision to maximize use of the incentive fee (see story p. 1) will have effects far broader and deeper than are apparent at first glance. Although the immediate application is on prime defense contracts, this profit-motivated lure to better quality and speedier delivery will be felt up and down the procurement ladder through every tier of subcontractor even into nonmilitary buying.

The new cost plus incentive fee contracts now being pushed by the Pentagon require sensitive procurement techniques, subject to careful manipulation to avoid pitfalls and backfiring (see P/W, Oct. 16, '61, p. 26). But as they come into wider use, the pyramiding effects of this procurement policy should become more and more evident.

For example: Some experts already are claiming that increased use of incentive defense contracts could be reflected in increased sales of new machine tools and other production equipment. Contractors will require better tooling not only to help produce at lower basic cost but also to increase quality and product performance, especially where failure to comply with contract terms results in a monetary penalty as in the new M-14 rifle contracts.

This new equipment, improved production knowhow, and keener management techniques developed in administering such contracts also will be utilized in areas outside the defense community. Industrial customers of defense suppliers will become heirs to benefits of these capabilities. And procurement managers undoubtedly will be watching closely the Pentagon's experience with its contract incentive clauses for possible broader use in their own negotiations with suppliers.

BUYERS GUIDE-Incoming reports of improved third quarter profits and manufacturers' optimism for even better performances by the year's end appear to be overcoming droopy spirits brought on by the auto strikes, Hurricane Carla, and other factors blamed for the one point dip on the Federal Reserve Board's September production index. The sag ended a six-month climb and clouded what most economists still consider an outlook with considerable sunshine ahead.

Some steels, packaging, and a variety of other industries have come in with glowing end-of-September reports. Many are venturing estimates of better even performances in the final quarter. And forecasters are even encouraged to predict that the 1961 fourth quarter rate of pretax profits may surpass even 1959's record high.

North Carolina Trade Fair Attracts 5,000 P.A.'s From Eight Nations

Charlotte, N. C .- An esti- Fair last week listening to sales mated 5,000 purchasing men, representing firms from coast-to-coast and in Europe and Asia,

talks and inspecting products of more than 300 firms located in the state.

The 10-day exposition closed last Saturday with exhibitors en-thusiastic about contacts made between out-of-state buyers and North Carolina manufacturers. The fair was planned in the pattern of European fairs so that buyers and sellers could do business right on the exhibit hall floor.

Members of the Virginia-Carolinas Purchasing Agents Assn. staffed a special lounge and reception area for visiting buyers. In addition to American firms, companies from Burma, Finland, Ireland, England, Sweden, the Netherlands, and Nationalist China also sent buyers to sample North Carolina wares.

Former State Purchasing Agent William Henderson, now head of the North Carolina Commerce and Industry Division, was director of the fair.

Price Changes for Purchasing Agents

Item & Company	Amount of Change	New Price	Reason
INCREASES			
Heavy fuel oil, Bunker C, regular gr., Gulf Coast, bbl Casein, Arg., lb		\$2.30 .195 5.35-\$16.20	growing demand short supply
Cement, Dundee, on payments after 15 days, bbl Radio & TV broadcasting equipment, RCA	.10 5%	****	incr. costs
REDUCTIONS			
Gasoline, Mid-cont. refiners, 91 oct. branded, gal. Unbranded, gal. Epoxy resin (Scotcheast #247), Minn. Mining & Mfg	.0025 .0025 11%-21%	.1025 .0975	competition competition prod. econs.
Menthol, Japanese, lb. Tin salts, sodium stannate, lb. Potassium stannate, lb. Tin crystals, anhyd, lb.	.60 .005 .005 .005	.731 .866 \$1.123	metal ease metal ease metal ease

Cost-Price Squeeze Generating New Products Late News in Brief

easier cutting steels are in the Inland's new tellurium works. alloy (three times easier to cut) is undergoing extensive tests as Steel's Cor-Ten which forms a hard, protective oxide. Fifty new steels and 30 surface treatments were introduced last year. U.S. Steel has 53 development programs going in eight industries

• Office equipment. Look for more electrostatic, "all-purpose" copying machines. Smith-Corona-Marchant, Savin Business Machine Corp. and BBM Photoproducts Mfg. Co. models are slated to come off production lines within a few months. Typewriters will probably come in for some radical changes due to enthusiastic reception given IBM's 'Selectric

• Rubber. Synthetics continue to take more jobs away from nat-The factory-built rubbers accounted for 71% of total consumption during the first six months of this year-upon from about 65% two years ago. Test-ing of ethylene propylene rub-ber for "lifetime" tires is said to be very promising.

• Machine tools. Numerical control for more and different kinds of machines is in the works. Pratt & Whitney's new Tape-O-Matic Drill (see story below) is billed by its makers as the first of a new generation of less expensive, simpler, more reliable machines. It's under \$9,000 price compares with machines costing \$20,000 and up, and includes a variety of warranty and guar-antee features highlighting its cost-reduction attributes.

Most controls so far have gone to drilling applications, but Airco's welding setup and Nu-Era Corp.'s tube bender are additional signs of increasing versatility. IBM's new "Auto Prompt" programing routine for ma-chine tapes will simplify prepara-

tion for new jobs.

• Electronics. Look for rapid growth of miniaturization and molecular electronics. First uses combine tiny electronic building blocks, as in Burroughs' just-an-nounced 12-lb. computer for the military; but molecular elements,

Navy Set to Auction Off Over \$4-Million Worth Of Surplus Equipment

Norfolk, Va.-Four million dollars worth of surplus military equipment will be sold at public auction here Nov. 16. The sup-plies include boat anchors, bulldozers, cameras, trucks, metalworking machine tools.

Registration for the auction will be Nov. 15. Catalogs of the items for sale may be obtained from: Officer-in-Charge, Navy Consolidated Surplus Sales Office, Dept. T-11, Building 224, Naval Supply Center, Norfolk, Va.

Among the machines on the block are a hydraulic electric metal baler, lathes, grinders, spot welding machines, gantry cranes, milling machines, nibbling machines, air compressors, pumps, gear shapers and metal bending machines.



MAGNESIUM AT BAT: New products include magnesium bat pinchhitting for wood. Former major leaguer Dixie Walker (1), now a baseball scout, discusses but with Magnesium Assn. Pres. C. A. Howe.

½-in, squares are in an advanced solids development. Higher power, more versatile transistors are appearing almost daily, and designs introduced 'universal'' by RCA and Amperex will soon be joined by a host of others.

• Plastics. Polypropylene still touted as the big growth plastic for general purpose use al-though capacity is several times the expected 80-million lb. consumption forecast for this year from 35-million lb. year). New grades are just starting to appear; W. R. Grace's irradiated form is the latest.

ABS is also ticketed for a large increase as are "engineering" terials such as acetals, (Delrin, Celcon) and polycarbonates. These later materials are expected to take jobs away from new markets are explored. Teflon is being used in-creasingly with other materials; valves and seals are two big areas.

• Hand tools, Familiar shop tools like the electric drill and portable saw are undergoing some radical changes. Black and Decker's portable drill and new gasoline powered saw weighing only 11 lb. and costing \$19.95, made by Comet Mfg. Co., Pasadena, Calif., (see picture, p. 1), are first in a long line of tools slated for an early introduction.

• Material handling. Several fundamental changes in handling equipment are under development, but such concepts as fuel cells and air cushioning are still some years off. Exide is researching a fuel cell powered industrial truck and has signed a tentative agreement with 17 truck makers for using the design. Hughes Aircraft is experimenting with air cushioned conveyors and cargo handling equipment.

Lift trucks that use a vacuum principle to handle car-toned goods (several smaller goods smaller boxes as well as a single large one) are undergoing tests at

• Packaging. Plastics are making further deep inroads in industrial packaging. Foam is get-ting more attention; Square D is cushioning circuit breakers in polystyrene foam, and Royal McBee is shipping typewriters in a foam and corregated container.

Polyethylene pouch and blister backs for small part shipment are forerunners of major revolution in industrial packaging methods. Plastic-paper foil combinations will be getting a big play in bulk tive parts and workmanship.

containing complete circuits in containers for liquids and semi-

• Materials. Epoxies are stepping up growth pace as new for-mulations expand fields of application. Union Carbide has just come out with a new one-can epoxy for coatings, adhesives and potting; while Rubber & As-bestos Co. has announced a twopart mix that works at room temperature.

Scores of companies are evaluating DuPont's new Baymal col-loidal alumina suspension, and first commercial uses should be

out next year.

• Lighting. Square fluorescents, electroluminescence and quartzline lamps are the hottest items. General Electric is expected to have production quantities available fluorescents square shortly, joining El-Tronics and several other smaller makers that have limited numbers of the bulbs at hand.

Sylvania and Westinghouse continue to push electrolumin-escent fixtures. New York Transit Authority's recent purchase of 3,000 units for subways joins a growing list of military and architectual uses. High power quartz lamps are being evaluated for highway, industrial, and outdoor

P&W Hoping New Drill Will Lure Small Firms Into Numerical Control

West Hartford, Conn.-Pratt & Whitney Co., Inc., has developed a new "low-cost" numerically-controlled drilling machine, that it will turn out on a mass production basis.

The new unit, known as the Tape-O-Matic," is priced at \$8,be-O-Matic," is priced at \$8,-It also will be made available on a lease plan, costing \$5 to \$8 a day, depending on the

length of the lease.

Daniel C. McCarthy, P&W executive vice president, said, "The new machine should enable every company in the country, no mat ter how small, to get 'its feet wet' in numerical control." Up until now, the high cost of numerical control equipment—the general range is from \$12,500 to \$34,-000—has prevented many firms

from getting into the field.

P&W emphasized its faith in the quality of the new machine by offering a money-back guarantee if the Tape-O-Matic does not reduce the drilling costs of any company within 90 days. In addi-tion, the company is offering a five-year warranty against defec-

P. A. Wins Packaging Award

New York—The Packaging Institute's professional award for 1961 was presented to a purchasing agent—E. H. Balkema, director of purchases for the household products division, Colgate

Balkema was cited for his work in establishing printing standards and stardardized form design methods in packaging. He was also honored for his work in developing substitute packaging materials during wartime and for development of a quality control system for folding cartons.

300 Tons of Pig Tin Sold

Washington-The General Services Administration sold only 300 tons of pig tin out of an offering 1,000 tons. Of the amount sold, 150 tons was grade A. Prices on the grade A ranged from a high of 19.53e/lb. to a low 191/4 e/lb.

GM Denies Charge

Detroit-General Motors Corp. has denied government charges that it used its large freight volume to induce railroads to purchase GM diesel locomotives. GM Pres. John F. Gordon said in a speech here to 125 rail officials that officials of GM's Electro-Motive Div., makers of diesels, have never been supplied with information about the firm's rail traffic.

Columbium Concentrates Shipped

Montreal-St. Lawrence Columbium & Metals Corp. made its first tonnage shipment of 53% columbium concentrates last week. The new mill, which went into pilot production last month, now is turning out about 500 tons/day. Demands for the concentrates are rising because of the increasing use of columbium by the steel industry and development of new columbium alloys.

\$4.5-Million Settlement to Blaw-Knox

Pittsburgh-Blaw-Knox Co. received a \$4.5-million settlement as a result of its excess cost claims against the government. Blaw-Knox had claimed that it lost \$8,601,000 during 1959 and 1960, largely because of many changes in the specification of the missile launching sites it built for the government.

Orders for Durables Rise

Washington-New orders for durable goods rose 1% in September to \$15.7-billion, the highest level in 27 months, the Commerce Dept. reported. Factory sales, however, dropped 1% from August to \$15-billion. The department blamed the sales drop—the first in eight months—primarily on the General Motors Corp. auto strike last month.

New IBM Transmission Devices

New York-International Business Machines Corp. has developed two versatile devices for transmitting computer data over telephone lines. The devices, the 7702 magnetic tape transmission unit, makes it possible to send information by one method, such as punched cards, and receive it at the other end in another form, such as magnetic tape. Both units can send and receive data at a rate of 300 characters/sec

Expect Competition and Overcapacity To Prolong Packaging Buyer's Market

(Continued from page 1) "This will keep up as long as there aren't any shortages-I feel there will be none.

P.A.'s and salesmen cited severe competition between materials, overcapacity in most lines, a continuous packaging materials and methods as reasons for price softness.

Zahn pointed to increasing competition among various firms in the same field as well as be-tween different materials. The battle between plastic and glass in the container field, and paper, plastic, and foil in wrapping continues unabaited. But now several types of plastics are com-petiting against each other for the blown bottle business. and also in flexible wrapping and film applications. This tends to keep prices low across the board.

However delegates felt there were signs of a higher prices in the paper packaging field. Fiberboard manufacturers recently hiked prices 10% and there are reports another price rise is due after the first of the year. On the other hand, plastics

prices will probably drop. "Plastics is coming down as technology to suffer.

advances, enabling the industry to compete more and more with paper and glass," said D. B. Car-mody, P.A. for Union Carbide Corp. "There's more excess capacity in plastics than in any other branch of the industry."

developsaw these P.A.'s ments as likely product trends:

• Increasing combinations of plastics and paper, in many cases also with metal, in containers.

• Lower processing costs through convenience packaging, cartons and containers de signed to cut down handling.

 Product innovation will come from the manufacturer, rather than the buyer, as an effort to get greater margins from new prod-ucts not yet subject to stiff com-petition. Delegates felt this was another reflection of the buyers market.

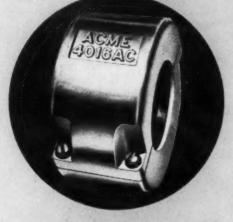
"I'm constantly looking to suppliers for new ideas," said Zahn, "but the P.A. has to help from the standpoint of creativeness. Nichols also cited the responsibility of the buyer. "The buyer is the one who is going to set the pace and the people not aware of his needs are likely

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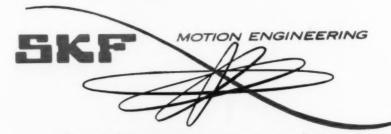
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